SECTION 4
CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

Safety precautions
The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

1. Units of components on the schematic diagram

Unless otherwise specified.

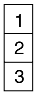
1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in µF, (P: PF).
3) All inductance values are in µH, (m: mH).
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

2. Indications of control voltage

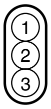
AUX : Active at high

$\overline{\text{AUX}}$ or AUX(L) : Active at low

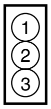
3. Interpreting Connector indications



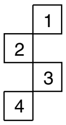
Removable connector



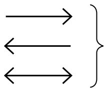
Wire soldered directly on board



Non-removable Board connector



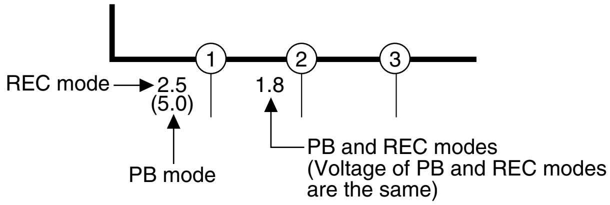
Board to Board



Connected pattern on board
The arrows indicate signal path

4. Voltage measurement

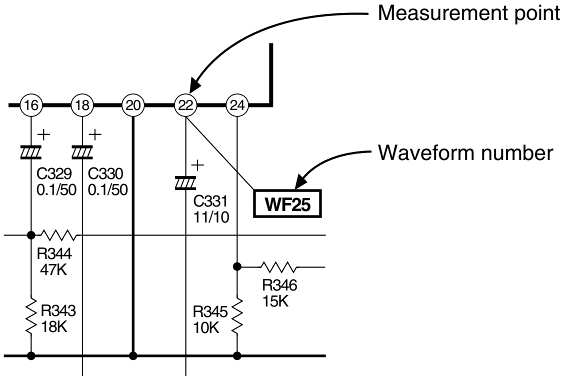
1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
   — : Unmeasurable or unnecessary to measure
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, Normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode
4) Indication on schematic diagram
   Voltage Indications for REC and PB mode on the schematic diagram are as shown below.



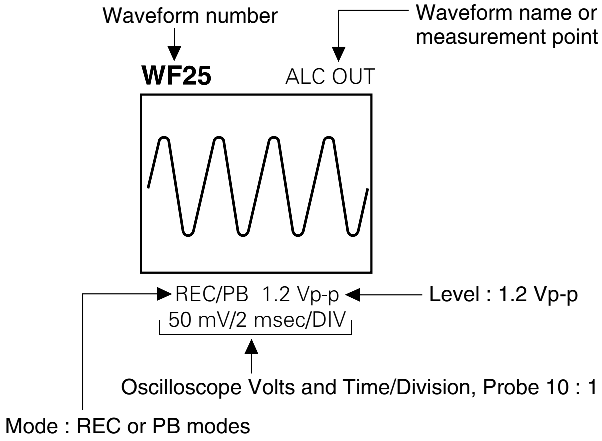
Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

5. Waveform measurement

1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test chatrs in the E-E mode
4) Indication on schematic diagram
   Waveform indications on the schematic diagram are as shown below.



5) Waveform indications



6. Signal path Symbols

The arrows indicate the signal path as follows.

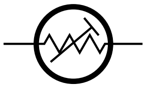
⇨	Playback signal path
▭▶	Playback and recording signal path
➡	Recording signal path (including E-E signal path)
⇨▷	Capstan servo path
➡▶	Drum servo path

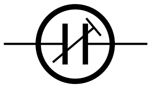
(Example)

⇨ R-Y	Playback R-Y signal path
➡ Y	Recording Y signal path

7. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.





8. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.

CIRCUIT BOARD NOTES

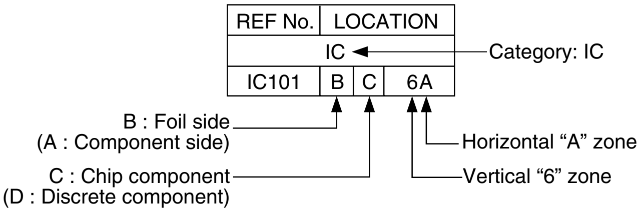
1. Foil and Component sides

1) Foil side (B side) :
Parts on the foil side seen from foil face (pattern face) are indicated.

2) Component side (A side) :
Parts on the component side seen from component face (parts face) indicated.

2. Parts location guides

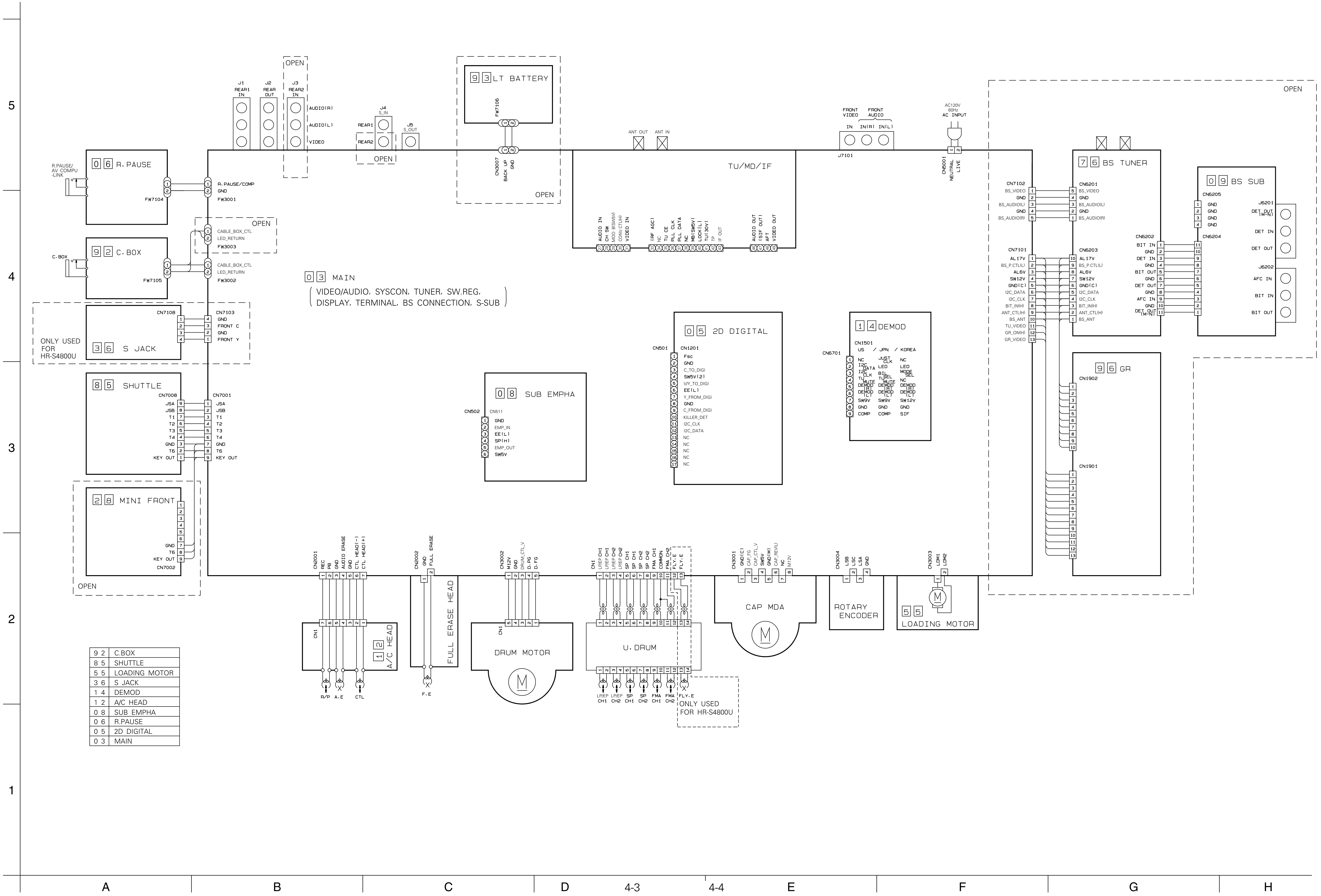
Parts location are indicated by guide scale on the circuit board.



Note:

For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

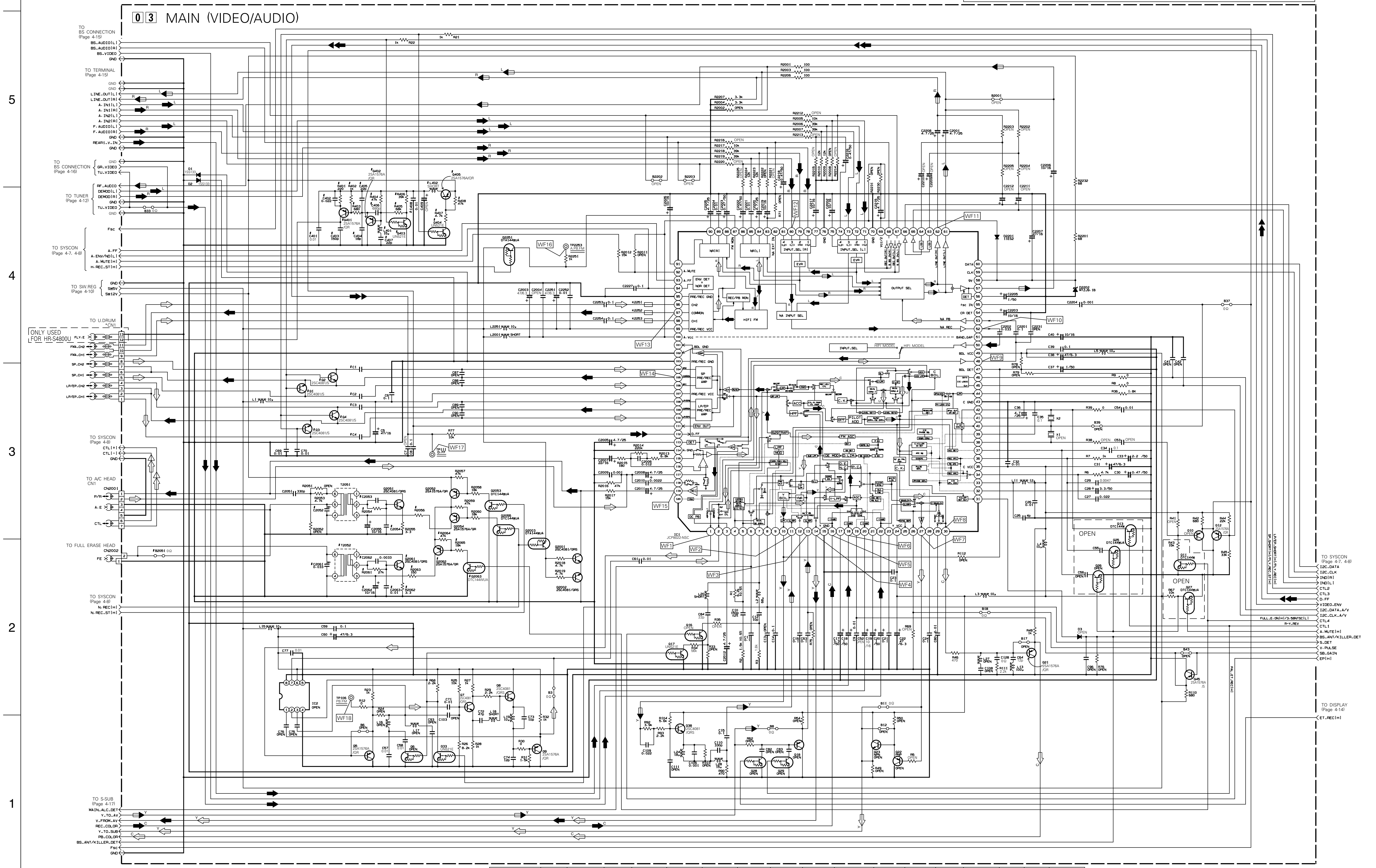
4.1 BOARD INTERCONNECTIONS



9 2	C.BOX
8 5	SHUTTLE
5 5	LOADING MOTOR
3 6	S JACK
1 4	DEMOD
1 2	A/C HEAD
0 8	SUB EMPHA
0 6	R.PAUSE
0 5	2D DIGITAL
0 3	MAIN

4.2 VIDEO/AUDIO SCHEMATIC DIAGRAM

NOTE : When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

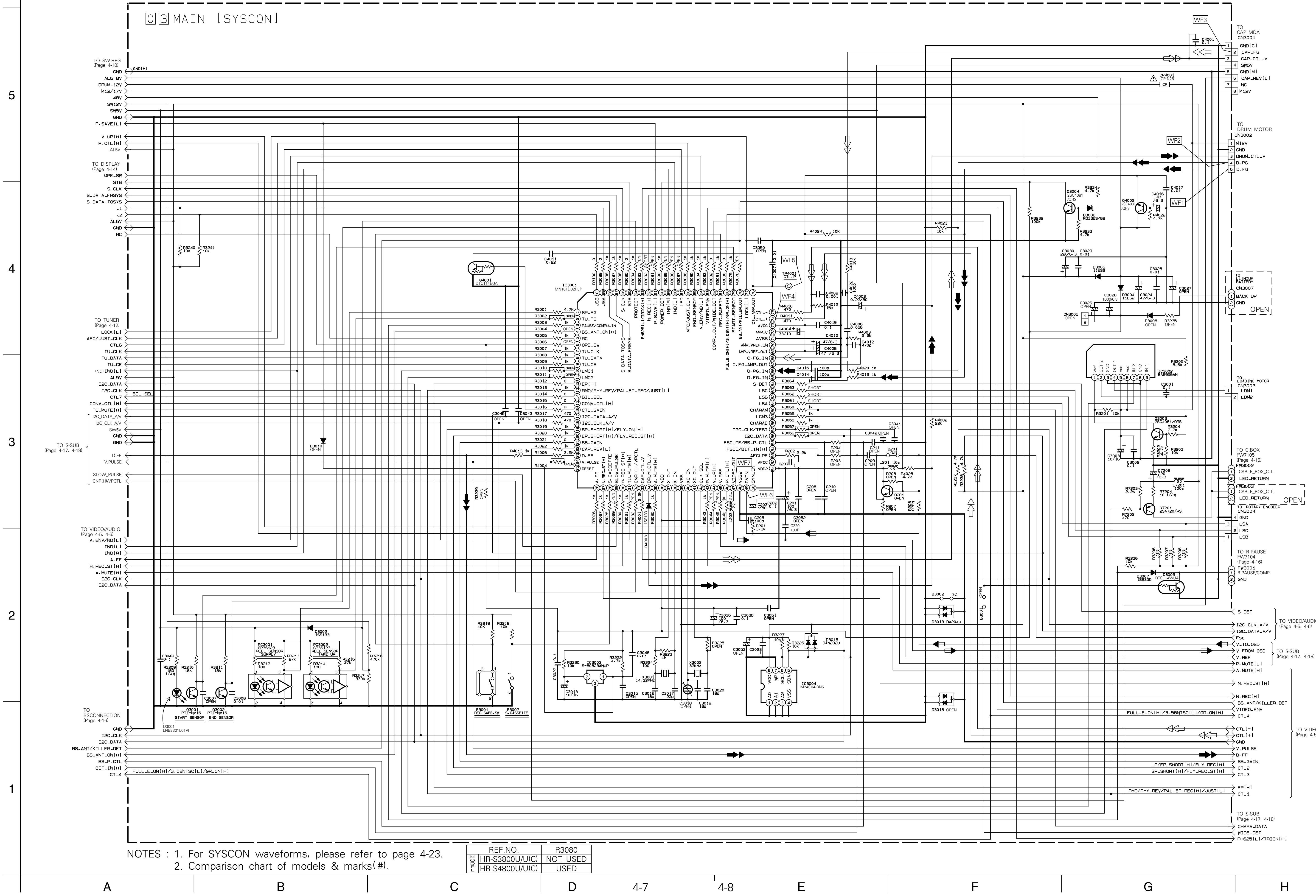


NOTES : 1. For VIDEO/AUDIO waveforms, please refer to page 4-23.
2. Comparison chart of models & marks (#).

	REF NO.	CN1	Q1-Q4	C1-C4	Q401-Q405	C401-C408	R401-R408	L401,L402	T2052	B2051	Q2061-Q2063	C2052	C2053	C2054	C2061-C2064	R2054	R2056	R2061-R2065
MODEL	HR-S3800U/U(C)	PIN1-11	USED	0.01 μF	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	USED	NOT USED	0.082 μF	0.0047 μF	0.022 μF	NOT USED	12kΩ	82Ω	NOT USED
	HR-S4800U/U(C)	PIN1-13	NOT USED	1 μF	USED	USED	USED	USED	USED	NOT USED	USED	0.033 μF	0.0033 μF	0.01 μF	USED	15kΩ	100Ω	USED

4.3 SYSTEM CONTROL SCHEMATIC DIAGRAM

NOTE : When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

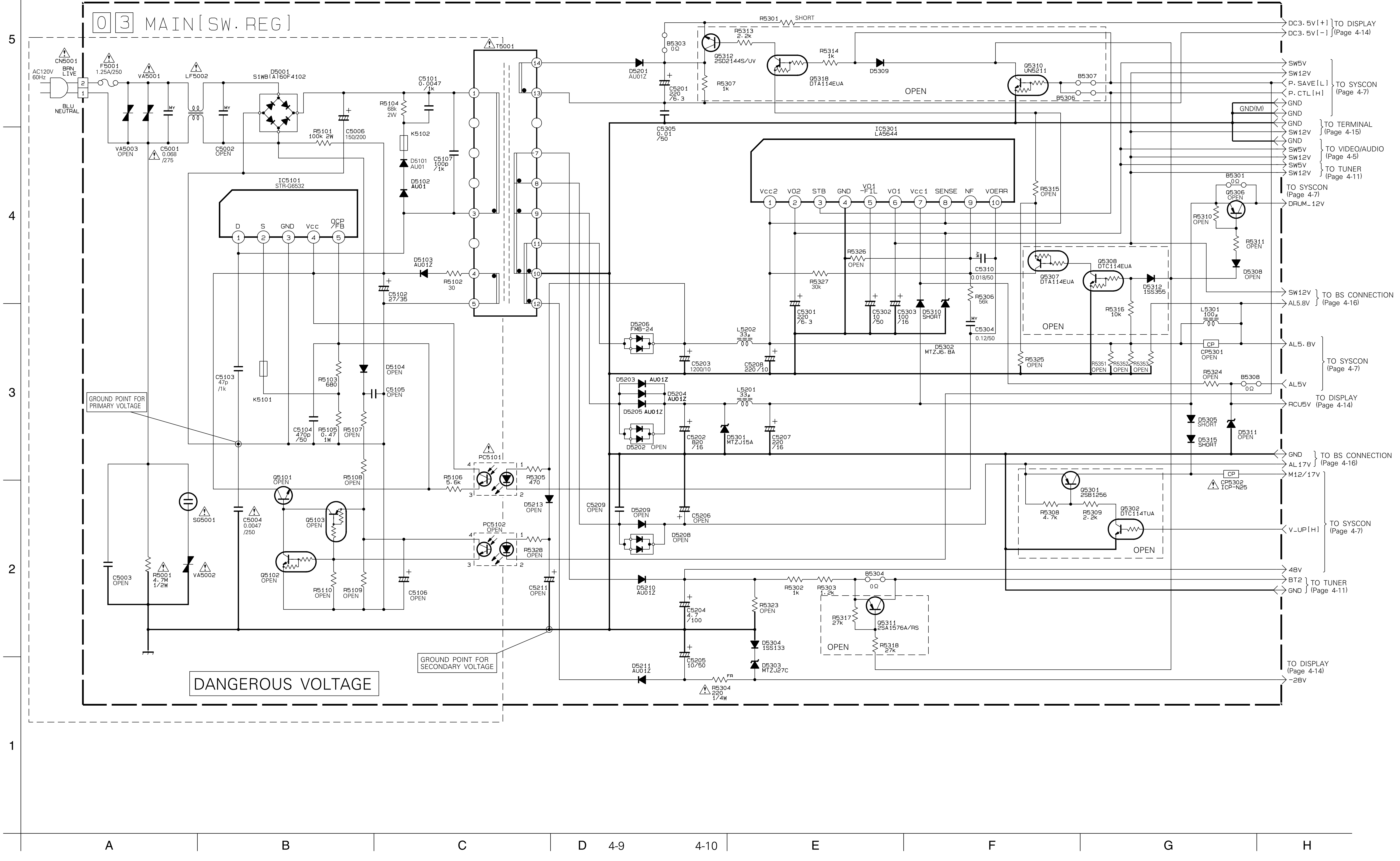


NOTES : 1. For SYSCON waveforms, please refer to page 4-23.
2. Comparison chart of models & marks(#).

	REF.NO.	R3080
MODEL	HR-S3800U/U(C)	NOT USED
	HR-S4800U/U(C)	USED

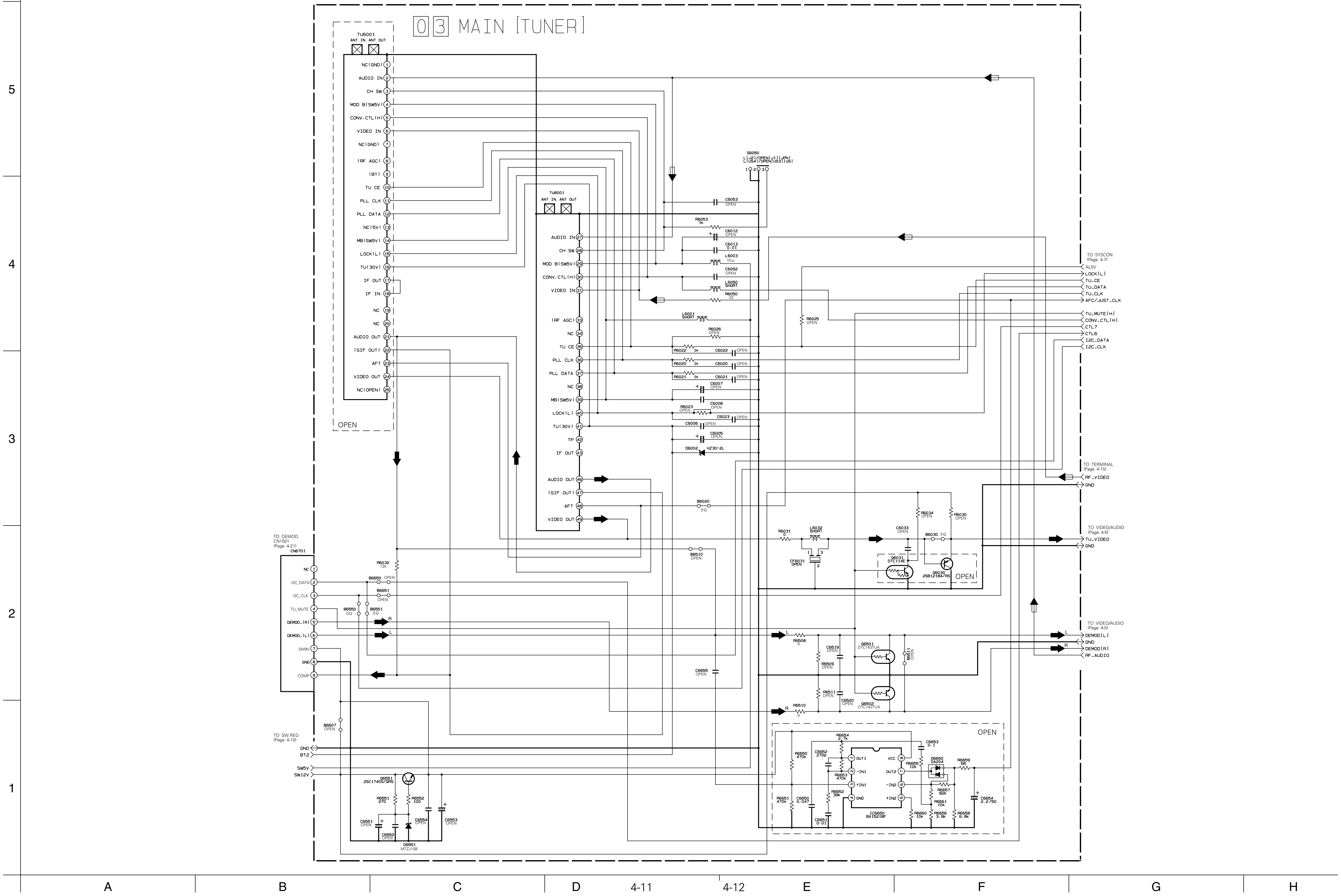
4.4 SWITCHING REGULATOR SCHEMATIC DIAGRAM

NOTE : When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



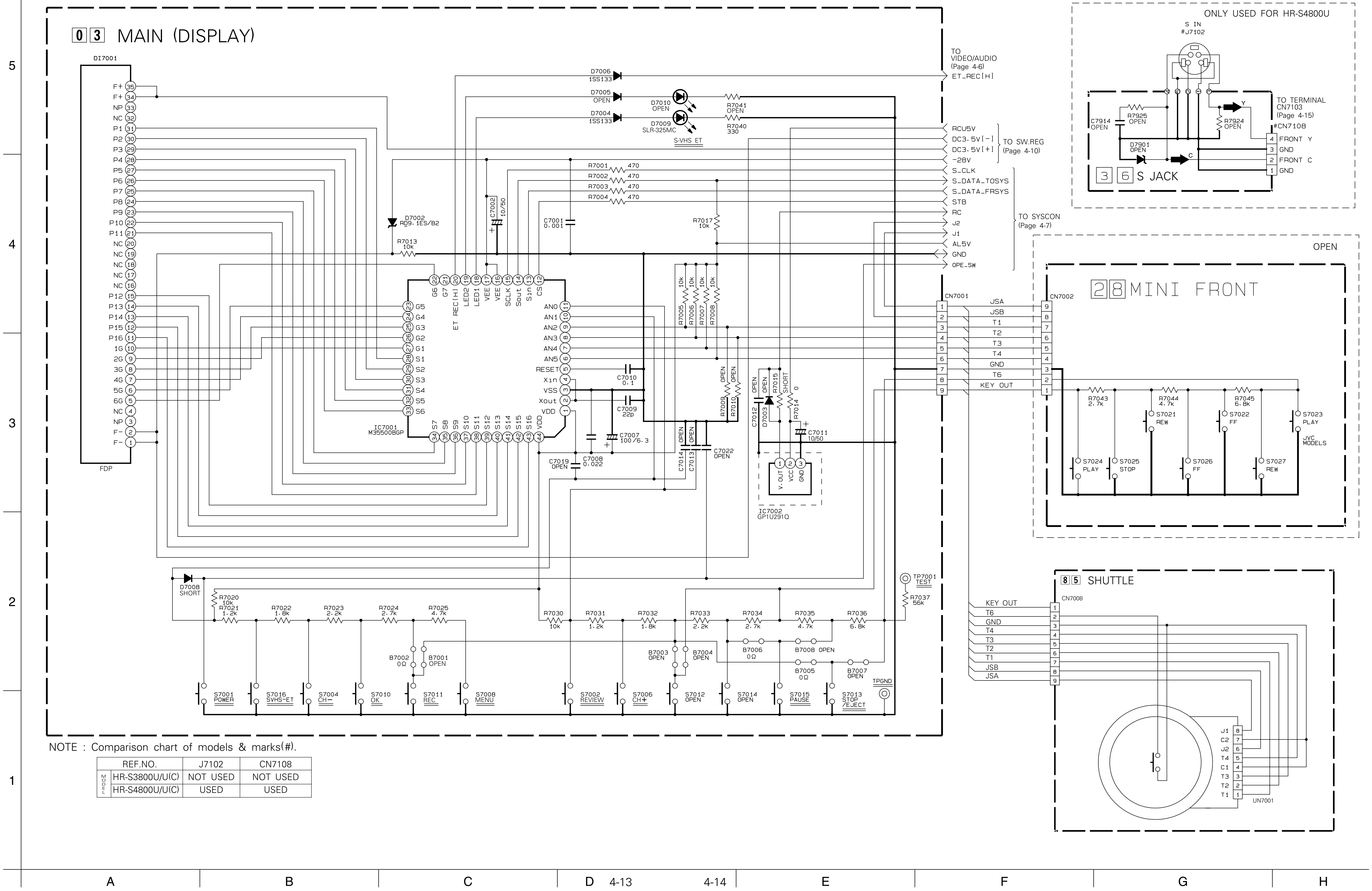
4.5 TUNER SCHEMATIC DIAGRAM

NOTE : When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



4.6 DISPLAY, S JACK AND SHUTTLE SCHEMATIC DIAGRAMS

NOTE : When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

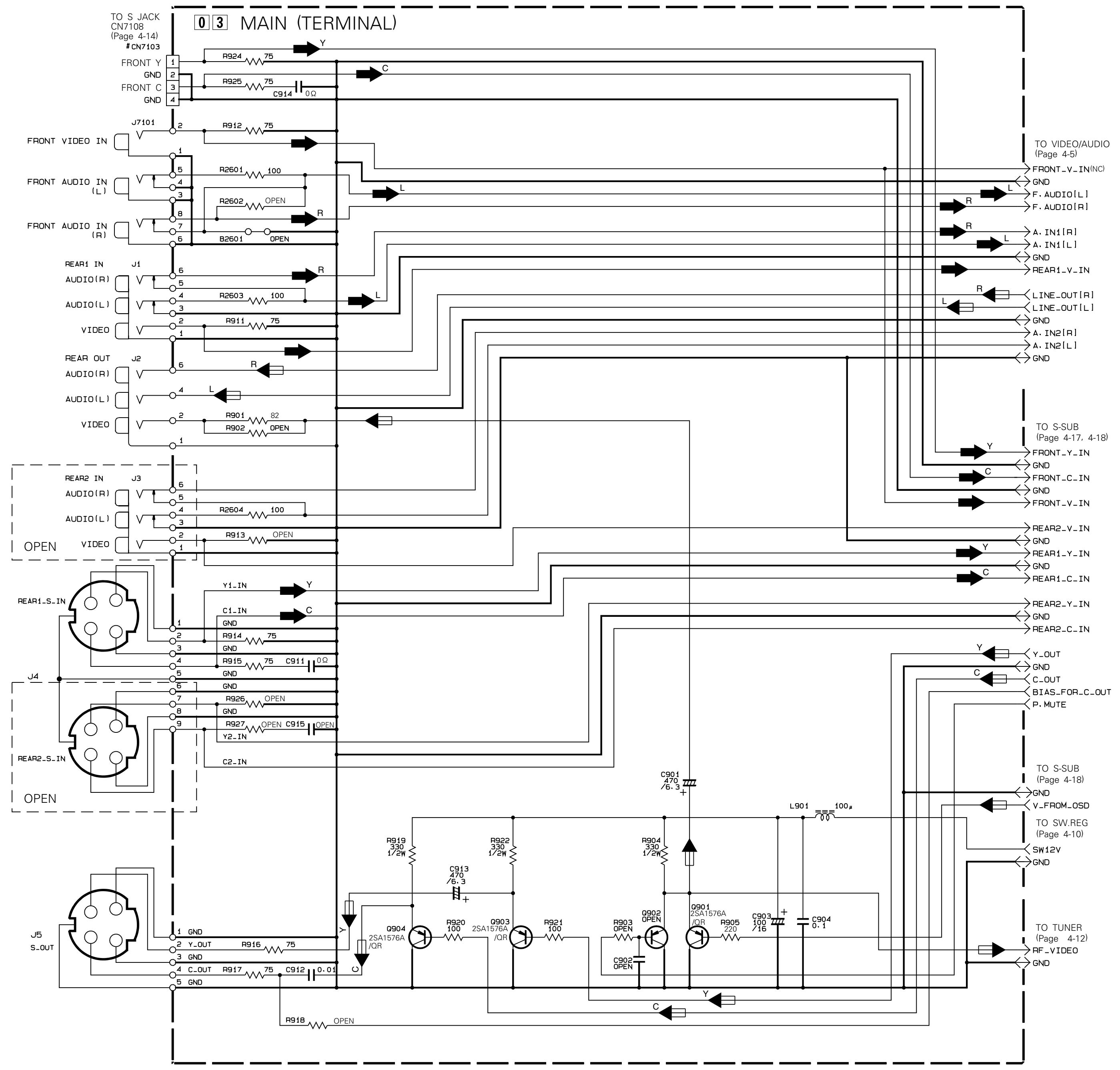


NOTE : Comparison chart of models & marks(#).

MODEL	REF.NO.	J7102	CN7108
	HR-S3800U/U(C)	NOT USED	NOT USED
	HR-S4800U/U(C)	USED	USED

4.7 TERMINAL SCHEMATIC DIAGRAM

NOTE : When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

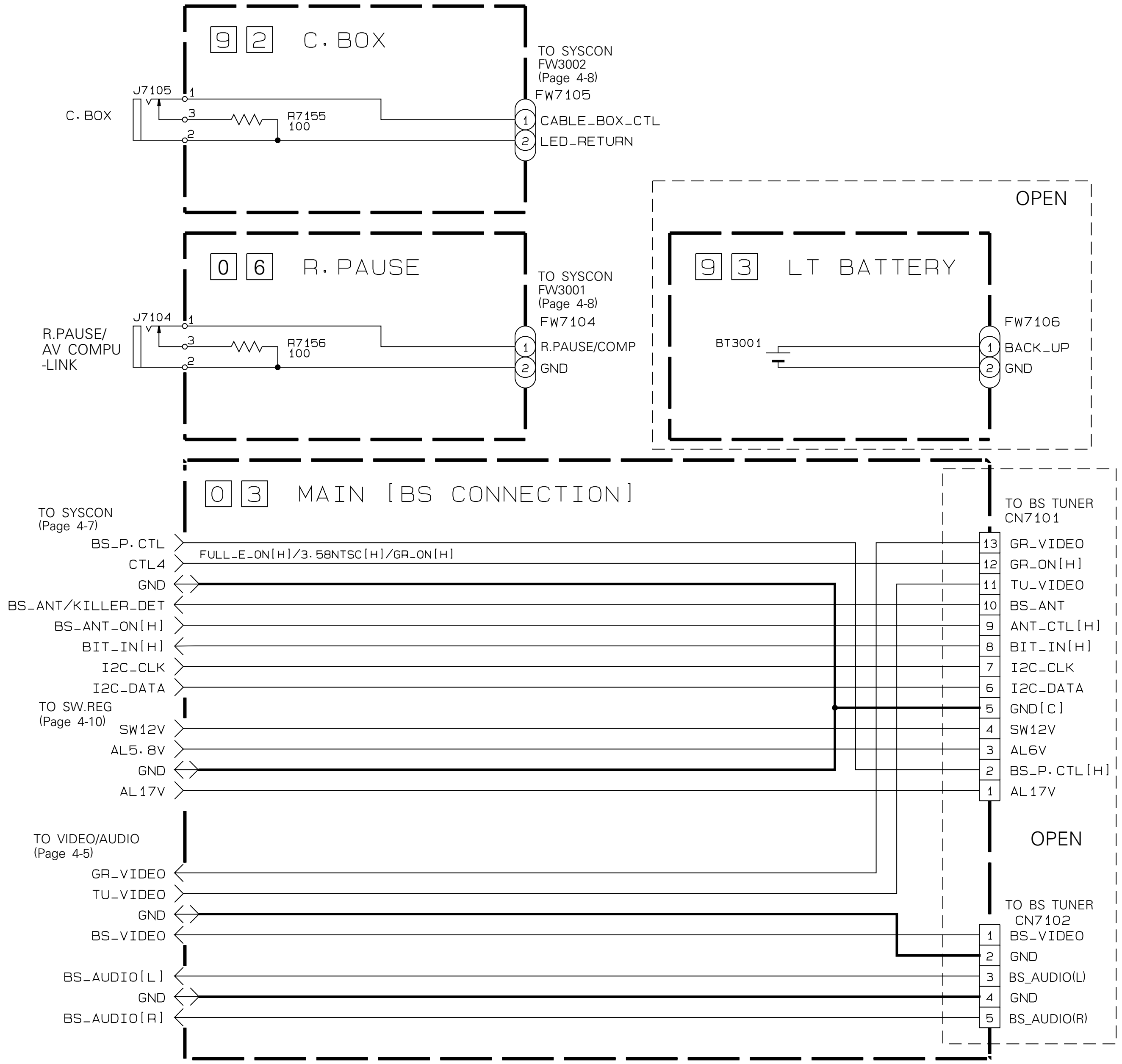


NOTE : Comparison chart of models & marks(#).

	REF.NO.	CN7103
MODEL	HR-S3800U/U(C)	NOT USED
	HR-S4800U/U(C)	USED

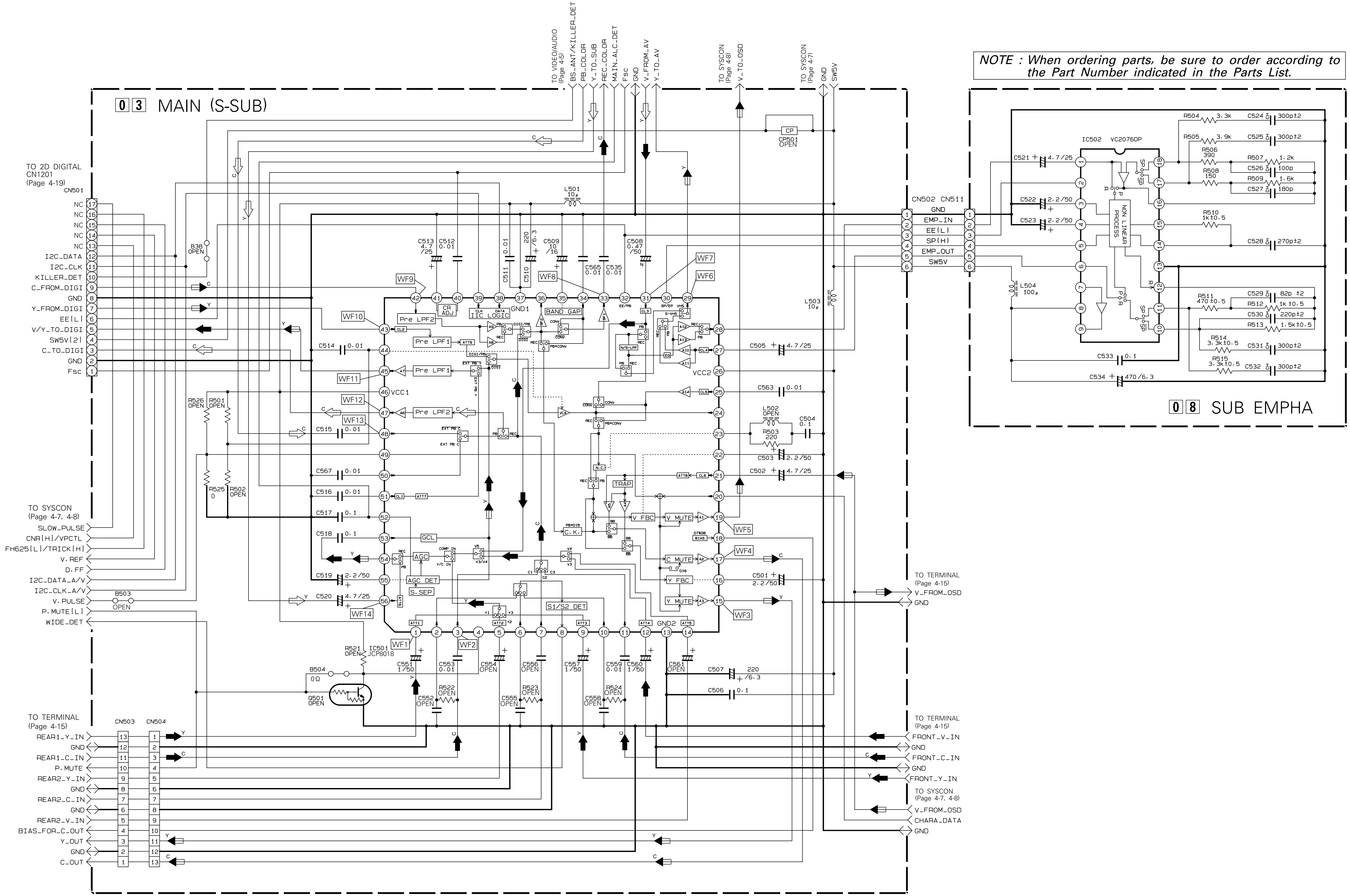
4.8 BS CONNECTION, C.BOX AND R.PAUSE SCHEMATIC DIAGRAMS

NOTE : When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



4.9 S-SUB AND SUB EMPHA SCHEMATIC DIAGRAMS

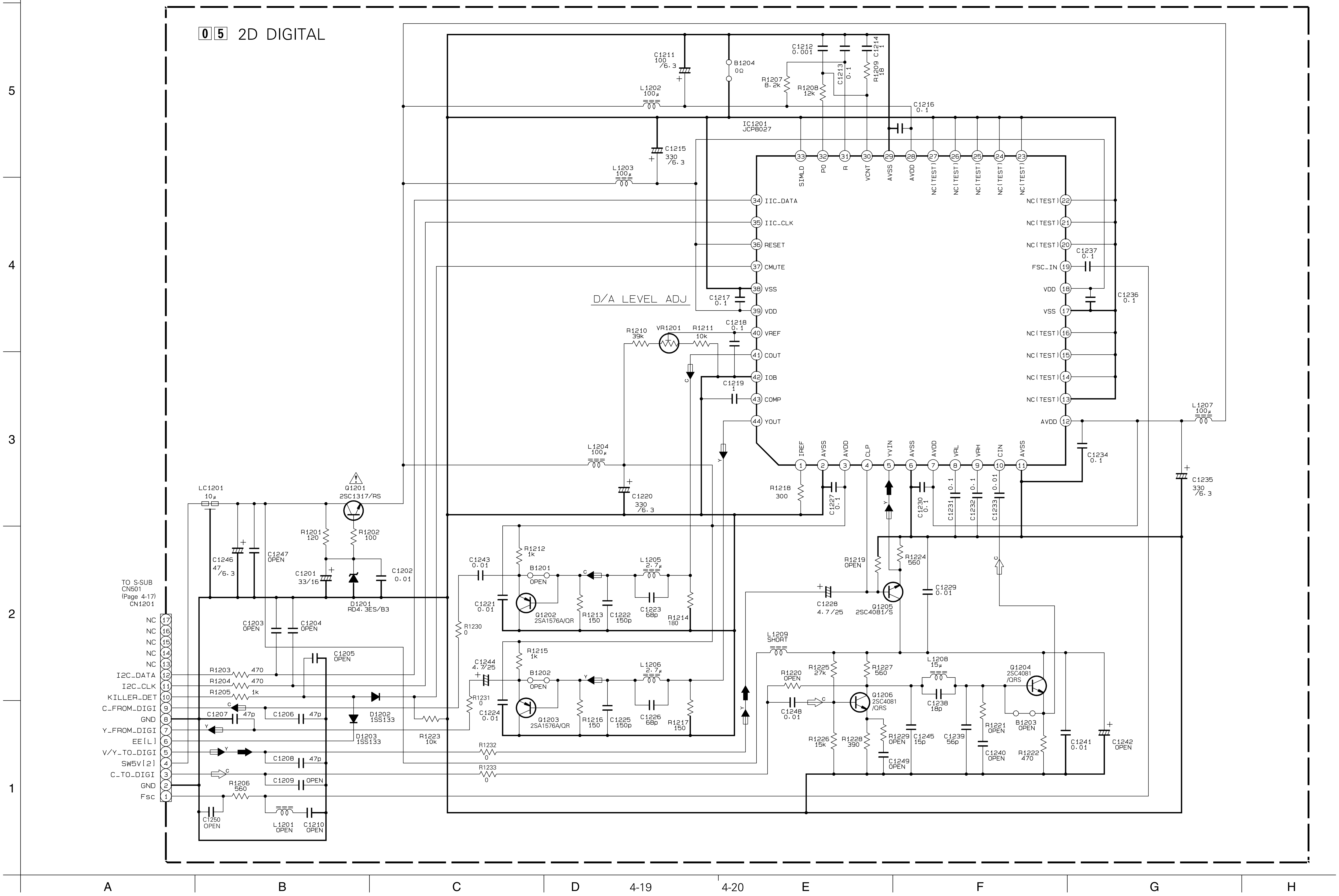
NOTE : When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



NOTE : For S-SUB waveforms, please refer to page 4-24.

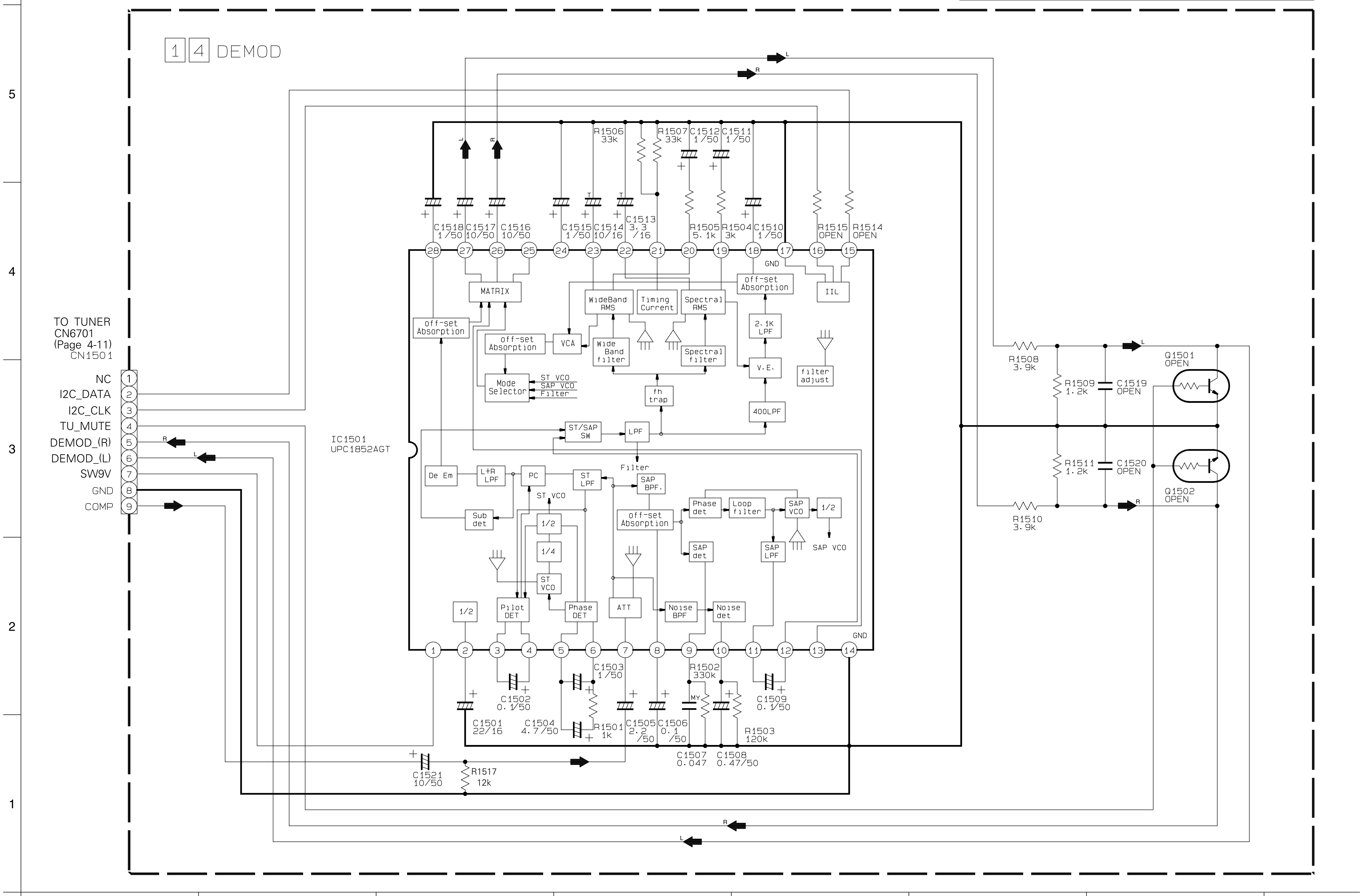
4.10 2D DIGITAL SCHEMATIC DIAGRAM

NOTE : When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



4.11 DEMODULATOR SCHEMATIC DIAGRAM

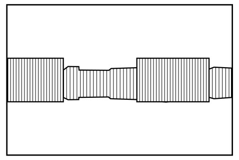
NOTE : When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



WAVEFORMS

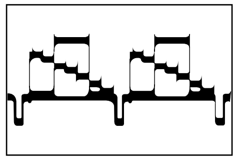
— VIDEO/AUDIO —

WF1 IC1-1



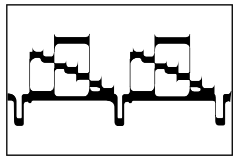
PB 1.0 Vp-p
50 mV/5 msec/DIV

WF2 IC1-11



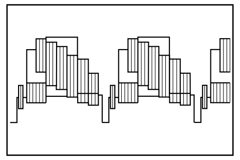
REC/PB 0.52 Vp-p
20 mV/20 µsec/DIV

WF3 IC1-13



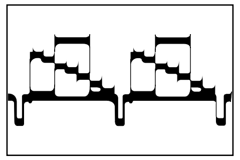
REC/PB 0.52 Vp-p
20 mV/20 µsec/DIV

WF4-1 IC1-14



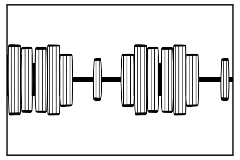
REC 0.35 Vp-p
10 mV/20 µsec/DIV

WF4-2 IC1-14



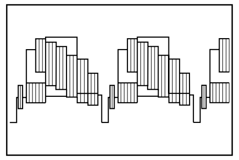
PB 0.5 Vp-p
20 mV/20 µsec/DIV

WF5 IC1-16



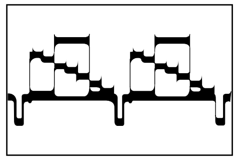
REC 0.68 Vp-p
20 mV/20 µsec/DIV

WF6 IC1-18



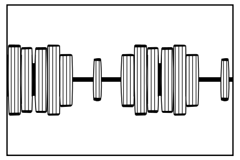
REC 1.0 Vp-p
20 mV/20 µsec/DIV

WF7 IC1-27



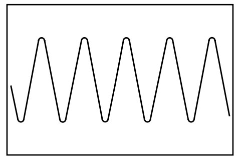
PB 2.1 Vp-p
50 mV/20 µsec/DIV

WF8 IC1-30



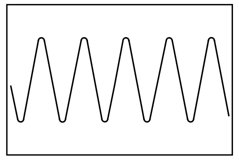
PB 0.64 Vp-p
20 mV/20 µsec/DIV

WF9 IC1-48



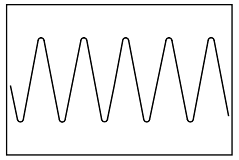
PB 0.72 Vp-p
20 mV/0.5 msec/DIV

WF10 IC1-52



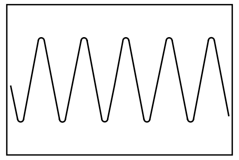
REC 0.11 Vp-p
2 mV/0.5 msec/DIV

WF11 IC1-62



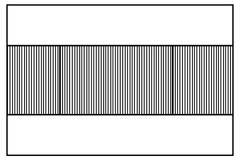
REC/PB 0.9 Vp-p
20 mV/0.5 msec/DIV

WF12 IC1-80



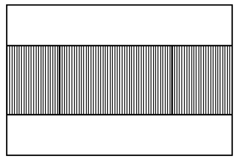
REC 0.2 Vp-p
5 mV/0.5 msec/DIV

WF13 IC1-97



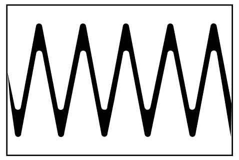
REC 1.8 Vp-p
0.1 V/5 msec/DIV

WF14 IC1-105



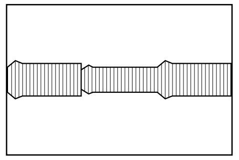
REC 2.1 Vp-p
0.1 V/1 msec/DIV

WF15 IC1-119



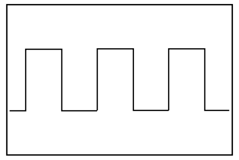
REC 0.8 Vp-p
20 mV/0.5 msec/DIV

WF16 TP2253
A.PB.FM



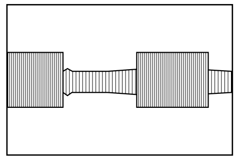
PB 0.8 Vp-p
50 mV/5 msec/DIV

WF17 TP111
D.FF



REC/PB 3.4 Vp-p
0.1 V/10 msec/DIV

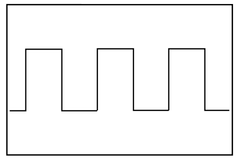
WF18 TP106
PB.FM



PB 1.4 Vp-p
0.1 V/5 msec/DIV

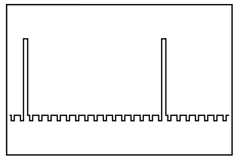
— SYSCON —

WF1 CN3002-5
D.FG



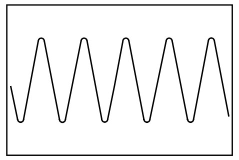
REC/PB 4.2 Vp-p
0.1 V/1 msec/DIV

WF2 CN3002-4
D.PG



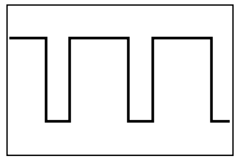
REC/PB 4.5 Vp-p
0.1 V/10 msec/DIV

WF3 CN3001-2
CAP_FG



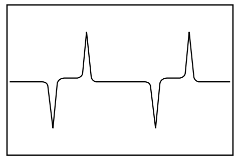
REC/PB 2.9 Vp-p
50 mV/0.5 msec/DIV

WF4 IC3001-74
CTL_+



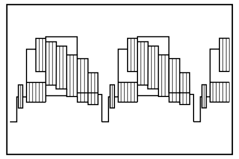
REC 3.6 Vp-p
0.1 V/10 msec/DIV

WF5 TP4001
CTL.P



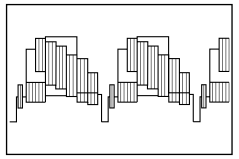
PB 3.0 Vp-p
0.1 V/10 msec/DIV

WF6 IC3001-49
CVIN



REC/PB 2.2 Vp-p
50 mV/20 µsec/DIV

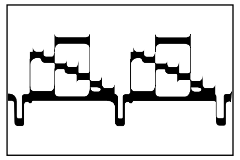
WF7 IC3001-47
VIDEO_OUT



REC/PB 2.2 Vp-p
50 mV/20 µsec/DIV

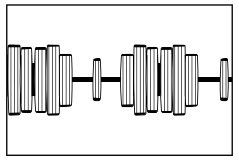
— S-SUB —

WF1 IC501-1



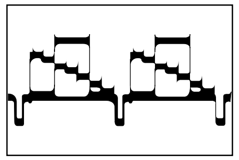
REC 1.0 Vp-p
20 mV/20 µsec/DIV

WF2 IC501-3



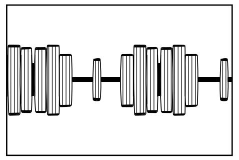
REC 0.7 Vp-p
20 mV/20 µsec/DIV

WF3 IC501-15



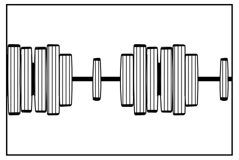
REC/PB 2.2 Vp-p
50 mV/20 µsec/DIV

WF4-1 IC501-17



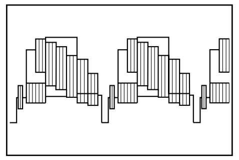
REC 1.4 Vp-p
50 mV/20 µsec/DIV

WF4-2 IC501-17



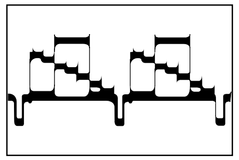
PB 1.2 Vp-p
50 mV/20 µsec/DIV

WF5 IC501-19



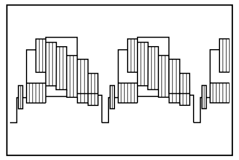
REC/PB 2.2 Vp-p
50 mV/20 µsec/DIV

WF6 IC501-29



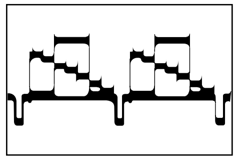
REC/PB 0.52 Vp-p
20 mV/20 µsec/DIV

WF7-1 IC501-31



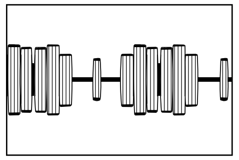
REC 0.35 Vp-p
10 mV/20 µsec/DIV

WF7-2 IC501-31



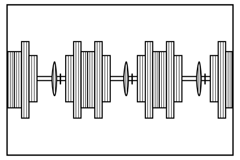
PB 0.5 Vp-p
20 mV/20 µsec/DIV

WF8 IC501-33



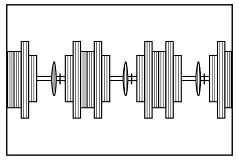
REC 0.68 Vp-p
20 mV/20 µsec/DIV

WF9-1 IC501-42



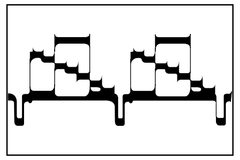
REC 0.57 Vp-p
20 mV/20 µsec/DIV

WF9-2 IC501-42



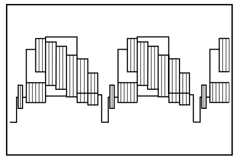
PB 0.64 Vp-p
20 mV/20 µsec/DIV

WF10 IC501-43



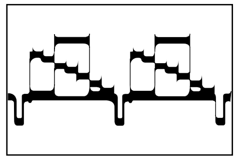
REC/PB 0.76 Vp-p
20 mV/20 µsec/DIV

WF11-1 IC501-45



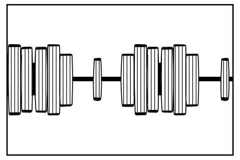
REC 1.7 Vp-p
50 mV/20 µsec/DIV

WF11-2 IC501-45



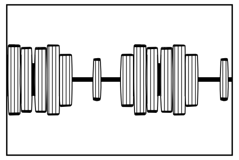
REC/PB 1.7 Vp-p
50 mV/20 µsec/DIV

WF12 IC501-47



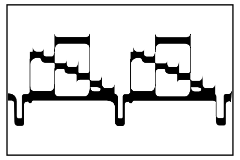
PB 1.0 Vp-p
50 mV/20 µsec/DIV

WF13 IC501-48



PB 0.48 Vp-p
20 mV/20 µsec/DIV

WF14 IC501-56



PB 2.1 Vp-p
50 mV/20 µsec/DIV

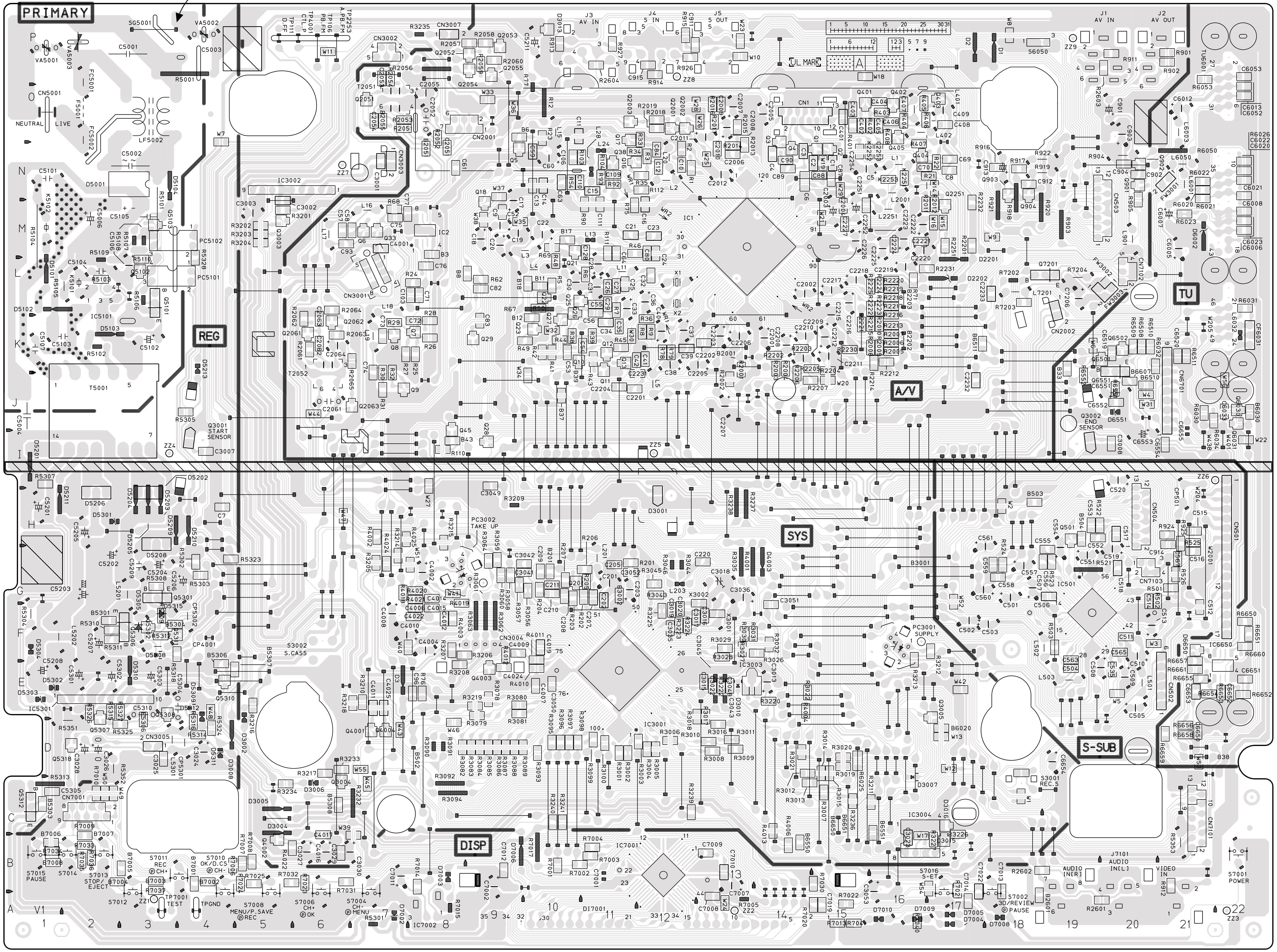
4.12 MAIN, A/C HEAD, C.BOX, S JACK, R.PAUSE, SHUTTLE AND LOADING MOTOR CIRCUIT BOARDS

<03> MAIN
LPB10089-001B

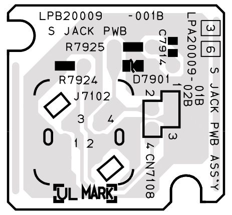
DANGEROUS VOLTAGE

• CAUTION
FOR CONTINUED PROTECTION AGAINST FIRE HAZARD ,REPLACE ONLY WITH SAME TYPE AND RATED FUSE(S).

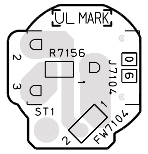
• ATTENTION:
POUR UNE PROTECTION PERMANENTE CONTRE LES RISQUE D'INCENDE, REMPLACER LES FUSIBLES PAR UN AUTRE DE MEME TYPE ET DE MEME TENSION.



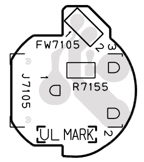
<36> S JACK [HR-S4800U/U(C)]
LPB20009-001B



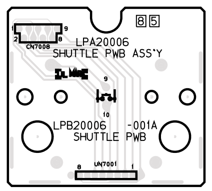
<06> R.PAUSE
LPB10089-001B



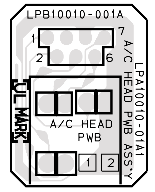
<92> C.BOX
LPB10089-001B



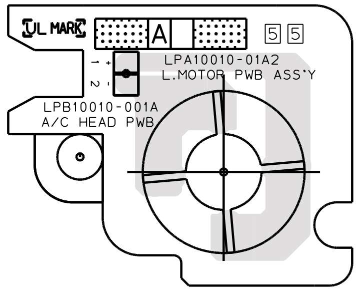
<85> SHUTTLE
LPB20006-001A



<12> A/C HEAD
LPB10010-001A



<55> LOADING MOTOR
LPB10010-001A

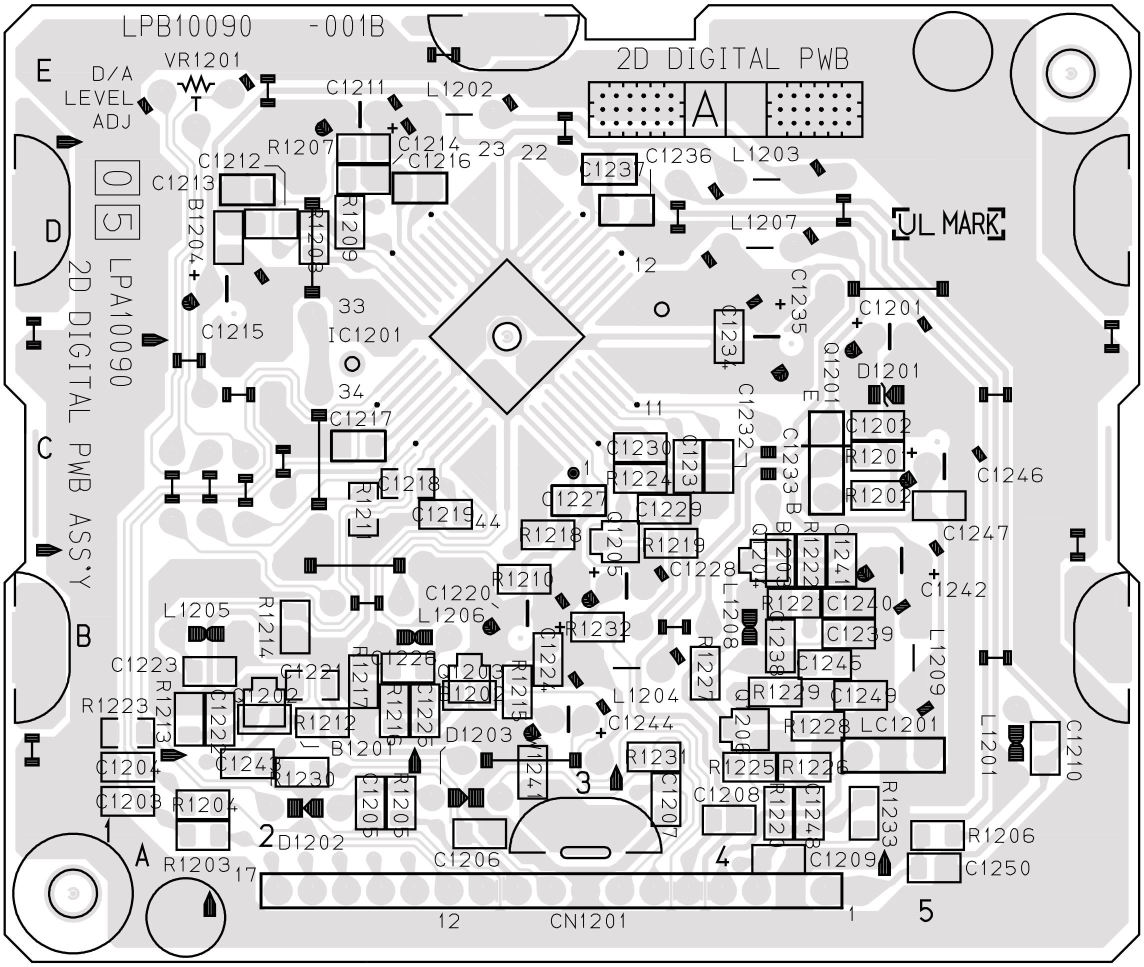


COMPONENT PARTS LOCATION GUIDE＜MAIN＞

REF.NO.	LOCATION		
CAPACITOR			
C1	B	C	15N
C2	B	C	15N
C3	B	C	14N
C4	B	C	14N
C5	A	D	16N
C6	B	C	14N
C7	B	C	4H
C8	B	C	17N
C9	B	C	9M
C10	B	C	12N
C11	B	C	10O
C12	B	C	12N
C13	B	C	10N
C14	B	C	10N
C15	B	C	11N
C16	B	C	12M
C17	A	D	9M
C18	A	D	9M
C19	A	D	9M
C20	A	D	9M
C21	B	C	11M
C22	A	D	10M
C23	B	C	12M
C24	B	C	12M
C25	B	C	11L
C26	B	C	11L
C27	B	C	11L
C28	A	D	11L
C29	B	C	11L
C30	A	D	10L
C31	A	D	11L
C32	B	C	12L
C33	A	D	11L
C34	B	C	11K
C35	B	C	11K
C36	A	D	12L
C37	A	D	12K
C38	A	D	12K
C39	B	C	12K
C40	A	D	12K
C41	B	C	12K
C42	B	C	11K
C52	A	D	9M
C53	B	C	10K
C54	B	C	11K
C55	B	C	11L
C56	B	C	11L
C57	B	C	6M
C58	B	C	7M
C59	B	C	10N
C60	A	D	10N
C61	B	C	8N
C63	B	C	10N
C64	B	C	11M
C69	B	C	17N
C70	B	C	16N
C71	B	C	8L
C72	B	C	8K
C73	B	C	7K
C74	B	C	7K
C75	B	C	7M
C76	B	C	8L
C77	B	C	8M
C80	B	C	12M
C82	B	C	9L
C83	B	C	9K
C84	B	C	12N
C87	B	C	15N
C88	B	C	15N
C89	B	C	14N
C90	B	C	14N
C93	B	C	6M
C96	B	C	8E
C103	B	C	8L
C106	B	C	10N
C109	B	C	11N
C110	B	C	10N
C111	B	C	11M
C128	B	C	11M
C201	A	D	11G
C202	B	C	11G
C203	A	D	11G
C205	B	C	11G
C207	B	C	11G
C208	B	C	10G
C209	B	C	10G
C210	B	C	10G
C211	B	C	10G
C220	B	C	13G
C401	B	C	15O
C402	B	C	15O
C403	B	C	15O
C404	B	C	16O
C405	B	C	16O
C406	B	C	16O
C407	B	C	16O
C408	B	C	17O
C409	A	D	17O
C501	A	D	18G
C502	A	D	17F
C503	A	D	17F
C504	B	C	19E
C505	A	D	20E
C506	B	C	19G
C507	A	D	18G
C508	A	D	20E
C509	A	D	20E
C510	A	D	20F
C511	B	C	20F
C512	B	C	21F
C513	A	D	20F
C514	B	C	20G
C515	B	C	21H
C516	B	C	21G
C517	B	C	20H
C518	B	C	20G
C519	A	D	20G
C520	A	D	20I
C535	B	C	20E
C551	A	D	19G
C552	B	C	19H
C553	B	C	19H
C554	A	D	19G
C555	B	C	19G
C556	B	C	19G
C557	A	D	18G
C558	B	C	18G
C559	B	C	18G
C560	A	D	18G
C561	A	D	17G
C563	B	C	19F
C565	B	C	20F
C567	B	C	21G
C901	A	D	20O
C902	B	C	20N
C903	A	D	20O
C904	B	C	20N
C911	B	C	12P
C912	B	C	18N
C913	A	D	18N
C914	B	C	21H
C915	B	C	12P
C2001	A	D	14K
C2002	A	D	14L
C2003	A	D	15M
C2004	B	C	15M
C2005	A	D	14O
C2006	B	C	13N
C2007	A	D	13O
C2008	A	D	13O
C2009	B	C	13O
C2010	B	C	13N
C2011	A	D	13O
C2012	A	D	13N
C2051	B	C	8N
C2052	A	D	8O
C2053	B	C	7P
C2054	B	C	7O
C2055	A	D	8O
C2061	A	D	6J
C2062	B	C	6K
C2063	B	C	6K
C2064	A	D	6K
C2201	B	C	11J
C2202	B	C	13K
C2203	A	D	13K
C2204	B	C	11J
C2205	A	D	13K
C2206	A	D	13K
C2207	A	D	13J
C2208	A	D	14K
C2209	A	D	14K
C2210	A	D	14K
C2211	A	D	15K
C2212	A	D	15K
C2215	A	D	15K
C2216	A	D	15L
C2217	A	D	15L
C2218	A	D	15L
C2219	A	D	16L
C2220	A	D	16M
C2221	B	C	16M
C2222	A	D	16M
C2223	A	D	16M
C2224	B	C	16M
C2225	A	D	16M
C2226	A	D	15M
C2227	B	C	15M
C2231	B	C	11J
C2232	B	C	17J
C2233	B	C	18L
C2251	A	D	15N
C2252	B	C	15M
C2253	B	C	16N
C2254	B	C	15N
C3001	B	C	7N
C3002	B	C	5M
C3003	A	D	5M
C3007	B	C	4I
C3008	B	C	20I
C3013	A	D	14E
C3015	B	C	13E
C3016	B	C	13F
C3017	B	C	13F
C3018	A	D	13G
C3019	B	C	12F
C3020	B	C	12F
C3022	B	C	13E
C3023	B	C	16B
C3024	A	D	4D
C3025	B	C	3D
C3026	A	D	2D
C3027	A	D	6B
C3028	A	D	2D
C3029	B	C	6B
C3030	A	D	7B
C3035	B	C	12F
C3036	A	D	13G
C3041	B	C	10G
C3042	B	C	10G
C3043	A	D	13E
C3045	A	D	13E
C3048	B	C	13E
C3049	B	C	9I
C3050	B	C	10E
C3051	B	C	14F
C3052	B	C	11G
C3053	A	D	16B
C4001	B	C	7M
C4002	A	D	8G
C4004	A	D	8F
C4006	B	C	8F
C4007	B	C	10E
C4008	A	D	7F
C4009	B	C	9F
C4010	A	D	8F
C4011	B	C	7E
C4012	B	C	8F
C4014	B	C	8G
C4015	B	C	8F
C4016	A	D	6B
C4017	B	C	6B
C4019	B	C	10F
C4022	B	C	8F
C4024	B	C	9E
C4025	B	C	7E
C5001	A	D	2P
C5002	A	D	3N
C5003	A	D	4P
C5004	A	D	1J
C5006	A	D	2M
C5101	A	D	1N
C5102	A	D	3K
C5103	A	D	2K
C5104	A	D	2L
C5105	A	D	3M
C5106	A	D	3L
C5107	A	D	1K
C5201	A	D	1H
C5202	A	D	3G
C5203	A	D	2G
C5204	A	D	3G
C5205	A	D	2H
C5206	A	D	4G
C5207	A	D	2F
C5208	A	D	1E
C5209	A	D	3G
C5211	A	D	10P
C5301	A	D	2E
C5302	A	D	2E
C5303	A	D	3E
C5304	A	D	4E
C5305	B	C	1C
C5310	A	D	3E
C6005	A	D	21M
C6006	B	C	22M
C6007	A	D	21M
C6008	B	C	22M
C6012	A	D	21O
C6013	B	C	22O
C6020	B	C	22N
C6021	B	C	22N
C6022	B	C	22N
C6023	B	C	22M
C6033	B	C	22J
C6052	B	C	22O
C6053	B	C	22P
C6519	B	C	20K
C6520	B	C	21K
C6551	A	D	20J
C6552	B	C	20J
C6553	A	D	20I
C6554	B	C	21I
C6650	B	C	21D
C6651	B	C	22E
C6652	B	C	22E
C6653	B	C	21E
C6654	A	D	19D
C6655	A	D	21J
C7001	A	D	11B
C7002	A	D	9B
C7007	A	D	13B
C7008	B	C	13A
C7009	B	C	13B
C7010	B	C	13B
C7011	A	D	7B
C7012	B	C	9B
C7013	B	C	18B
C7014	B	C	17A
C7019	B	C	15A
C7022	B	C	17B
C7206	A	D	19L
CONNECTOR			
CN1	A	D	14O
CN501	A	D	22I
CN502	A	D	21E
CN503	A	D	19M
CN504	A	D	20H
CN2001	A	D	9O
CN2002	A	D	19L
CN3001	A	D	7L
CN3002	A	D	7P
CN3003	A	D	7N
CN3004	A	D	9F
CN3005	A	D	3D
CN3007	A	D	8P
CN5001	A	D	1O
CN6701	A	D	21J
CN7001	A	D	2C
CN7101	A	D	21B
CN7102	A	D	20L
CN7103	A	D	20G
DIODE			
D1	A	D	18P
D2	A	D	17P
D3	A	D	7F
D2201	A	D	17L
D2202	A	D	16L
D3001	A	D	12H
D3002	A	D	5D
D3004	A	D	5C
D3005	A	D	5C
D3006	A	D	6C
D3007	B	C	16C
D3008	A	D	4E
D3010	B	C	13E
D3013	B	C	10P
D3015	B	C	17B
D3016	B	C	17C
D4003	A	D	14H
D5001	B	C	3N
D5101	A	D	1L
D5102	A	D	2L
D5103	A	D	2K
D5104	A	D	3N
D5201	A	D	1I
D5202	A	D	3H
D5203	A	D	3I
D5204	A	D	3I
D5205	A	D	3I
D5206	A	D	2H
D5208	A	D	3H
D5209	A	D	3H
D5210	A	D	4H
D5211	A	D	1H
D5213	A	D	4J
D5301	A	D	2H
D5302	A	D	1E
D5303	A	D	1E
D5304	A	D	1F
D5305	A	D	3F
D5308	B	C	3F
D5309	A	D	4D
D5310	A	D	3F
D5311	A	D	4D
D5312	B	C	4E
D5315	A	D	3F
D6002	A	D	21M
D6551	A	D	20J
D6650	B	C	21F
D7002	A	D	7A
D7003	A	D	8B
D7004	A	D	17A
D7005	A	D	17A
D7006	A	D	9B
D7008	A	D	18A
D7009	A	D	16A
D7010	A	D	16A
IC			
IC1	B	C	13M
IC2	B	C	8M
IC501	B	C	19F
IC3001	B	C	11E
IC3002	A	D	6N
IC3003	B	C	13E
IC3004	A	D	16C
IC5101	A	D	2L
IC5301	A	D	2E
IC6650	B	C	22E
IC7001	B	C	12B
IC7002	A	D	8A
JACK			
J1	A	D	20Q
J2	A	D	21Q
J3	A	D	11Q
J4	A	D	12Q
J5	A	D	13Q
J7101	A	D	20A
COIL			
L1	A	D	16N
L2	A	D	12N
L3	A	D	10M
L4	A	D	10L
L5	A	D	12J
L11	A	D	11L
L13	A	D	11M
L15	A	D	10O
L16	A	D	7M
L17	A	D	6M
L18	A	D	7K
L19	A	D	7K
L20	A	D	12N
L24	A	D	11N
L28	A	D	11N
L201	A	D	11G
L203	A	D	12G
L401	A	D	16O
L402	A	D	17O
L501	A	D	20E
L502	A	D	19F
L503	A	D	19E
L901	A	D	20M
L2001	A	D	16N
L2251	A	D	16M
L5201	A	D	3G
L5202	A	D	1F
L5301	A	D	3D
L6001	A	D	21N
L6003	A	D	21O
L6032	A	D	22K
L6050	A	D	21N
L7201	A	D	18L
TRANSISTOR			
Q1	B	C	15N
Q2	B	C	15N
Q3	B	C	14O
Q4	B	C	14N
Q5	B	C	9N
Q6	B	C	7M
Q7	B	C	8K
Q8	B	C	7K
Q9	B	C	7J
Q10	B	C	10K
Q11	B	C	11K
Q12	B	C	11K
Q13	B	C	11K
Q16	B	C	11N
Q17	B	C	11O
Q18	B	C	9M
Q21	B	C	10M
Q22	B	C	10L
Q23	B	C	10K
Q25	B	C	11L
Q26	B	C	10L
Q27	B	C	10K
Q28	B	C	9I
Q29	B	C	9K
Q33	B	C	7M
Q38	B	C	11N
Q45	B	C	8J
Q201	B	C	10G
Q401	B	C	15O
Q402	B	C	16O
Q403	B	C	17O
Q404	B	C	16N
Q405	B	C	16O
Q501	B	C	19H
Q901	B	C	20N
Q902	B	C	20N
Q903	B	C	18N
Q904	B	C	18N
Q2001	B	C	12O
Q2002	B	C	12O
Q2003	B	C	11O
Q2051	B	C	7O
Q2052	B	C	9P
Q2053	B	C	9P
Q2054	B	C	9P
Q2055	B	C	9P
Q2061	B	C	6K
Q2062	B	C	6K
Q2063	B	C	7J
Q2251	B	C	17M
Q3001	A	D	4I
Q3002	A	D	19I
Q3003	B	C	5M
Q3004	B	C	6C
Q3005	B	C	17E
Q4001	B	C	7D
Q4002	B	C	5B
Q4003	B	C	9E
Q4004	B	C	7D
Q5101	A	D	3L
Q5102	B	C	3L
Q5103	B	C	3M
Q5301	A	D	3G
Q5302	B	C	3F
Q5306	A	D	3F
Q5307	B	C	2E
Q5308	B	C	3E
Q5310	B	C	4E
Q5311	B	C	3F
Q5312	A	D	1C
Q5318	B	C	2D
Q6030	B	C	22J
Q6031	B	C	22J
Q6501	B	C	20K
Q6502	B	C	20K
Q6551	A	D	20K
Q7201	A	D	19L
RESISTOR			
R1	B	C	12N
R2	B	C	12N
R3	B	C	12N
R5	B	C	10L
R6	B	C	11L
R7	B	C	11L
R8	B	C	12K
R9	B	C	12K
R12	A	D	10P
R21	B	C	17N
R22	B	C	17N
R23	B	C	10O
R24	B	C	8L
R25	B	C	8K
R26	B	C	8K
R27	B	C	7K
R28	B	C	8K
R29	B	C	7K
R30	B	C	7K
R31	B	C	7J
R32	B	C	7K
R33	B	C	12O
R34	B	C	11N
R35	B	C	12N
R36	B	C	12K
R38	B	C	10K
R39	B	C	11K
R41	B	C	10K
R42	B	C	10K
R43	B	C	11K
R44	B	C	10K
R45	B	C	11K
R46	B	C	11M
R48	B	C	10L
R49	B	C	10K
R50	B	C	10L
R54	B	C	10N
R62	B	C	9L
R67	A	D	9L
R68	B	C	7M
R69	B	C	10M
R71	B	C	16L
R75	B	C	11M
R76	B	C	8E
R77	A	D	10P
R78	B	C	12K
R79	B	C	12K
R90	B	C	11M
R92	B	C	11N
R93	B	C	11N
R103	B	C	11N
R104	B	C	11N
R110	B	C	8I
R111	B	C	11M
R112	B	C	12N
R201	B	C	11G
R202	B	C	11G
R203	B	C	10G
R204	B	C	10G
R205	B	C	11G
R206	B	C	11G
R207	B	C	10G
R401	B	C	15O
R402	B	C	16O
R403	B	C	16O
R404	B	C	16O
R405	B	C	16O
R406	B	C	16O
R407	B	C	16N
R408	B	C	16O
R501	B	C	21G
R502	B	C	21G
R503	B	C	19F
R521	A	D	20G
R522	B	C	20H
R523	B	C	19G
R524	B	C	18G
R525	B	C	21H
R526	B	C	21G
R901	B	C	21P
R902	B	C	21P
R903	A	D	19M
R904	A	D	20N
R905	B	C	20N
R911	B	C	20P
R912	B	C	21B
R913	B	C	10P
R914	B	C	12P
R915	B	C	12P
R916	B	C	18N
R917	B	C	18N
R918	A	D	18N
R919	A	D	18N
R920	A	D	18N
R921	A	D	18N
R922	A	D	18N
R924	B	C	21H
R925	B	C	21H
R926	B	C	12P
R927	B	C	11P
R2001	B	C	13K
R2002	B	C	13J
R2003	B	C	14K
R2004	B	C	14K
R2005	B	C	16K
R2006	B	C	16K
R2007	B	C	16K
R2008	B	C	16K
R2009	B	C	16K
R2010	B	C	16K
R2011	B	C	16M
R2012	B	C	17M
R2013	B	C	13N
R2014	B	C	13N
R2015	B	C	13O
R2016	B	C	13O
R2017	B	C	13O
R2018	B	C	12O
R2019	B	C	12O
R2051	B	C	7O
R2052	B	C	8O
R2053	B	C	7O
R2054	B	C	7O
R2055	B	C	7O
R2056	A	D	8P
R2057	B	C	9P
R2058	B	C	9P
R2059	B	C	9P
R2060	B	C	9P
R2061	B	C	6K
R2062	B	C	6K
R2063	B	C	6K
R2064	B	C	6L
R2065	B	C	7K
R2201	B	C	17M
R2202	B	C	14K
R2203	B	C	14K
R2204	B	C	15K
R2205	B	C	15K
R2206	B	C	14J
R2207	B	C	14J
R2212	B	C	16K
R2213	B	C	16K
R2214	B	C	16K
R2215	B	C	16K
R2216	B	C	16L
R2217	B	C	16L
R2218	B	C	16L
R2219	B	C	16L
R2220	B	C	16L
R2221	B	C	15K
R2222	B	C	16L
R2223	B	C	16L
R2224	B	C	16L
R2225	B	C	16L
R2230	B	C	15K
R2231	B	C	17L
R2232	B	C	17M
R2251	B	C	17M
R2601	B	C	20A
R2602	B	C	19B
R2603	B	C	20P
R2604	B	C	11P
R3001	B	C	11D
R3002	B	C	11D
R3003	B	C	12D
R3004	B	C	12D
R3005	B	C	12D
R3006	B	C	12D
R3007	B	C	15C
R3008	B	C	13D
R3009	B	C	13D
R3010	B	C	13D
R3011	B	C	13D
R3012	B	C	14D
R3013	B	C	14C
R3014	B	C	15D
R3015	B	C	15D
R3016	B	C	13D
R3017	B	C	13E
R3018	B	C	13E
R3019	B	C	15D
R3020	B	C	15D
R3021	B	C	14D
R3022	B	C	14E
R3026	B	C	14F
R3027	B	C	13F
R3028	B	C	13F
R3029	B	C	13F
R3030	B	C	13F
R3031	B	C	13F
R3032	B	C	14F
R3035	A	D	13H
R3043	B	C	12G
R3044	A	D	12G
R3045	B	C	12G
R3046	A	D	12G
R3056	B	C	10G
R3057	B	C	9G
R3058	B	C	9G
R3059	B	C	9G
R3060	B	C	9G
R3061	A	D	9G
R3062	A	D	9G
R3063	A	D	9G
R3064	B	C	9G
R3078	B	C	9E
R3079	B	C	9E
R3080	B	C	9E
R3081	B	C	9E
R3082	B	C	8D
R3083	B	C	9D
R3084	B	C	9D
R3085	B	C	9D
R3086	B	C	9D
R3087	B	C	9D
R3088	B	C	9D
R3089	B	C	10D
R3090	A	D	8D
R3091	A	D	8D
R3092	A	D	8C
R3093	B	C	10D
R3094	A	D	8C
R3095	B	C	10D
R3096	B	C	10D
R3097	B	C	10D
R3098	B	C	10D
R3099	B	C	11D
R3100	B	C	11D
R3201	B	C	5M
R3202	B	C	5M
R3203	B	C	5M
R3204	B	C	5M
R3205	B	C	7G
R3206	B	C	8F
R3207	B	C	8F
R3208	B	C	8E
R3209	A	D	9H
R3210	B	C	7E
R3211	B	C	16C
R3212	B	C	17F
R3213	B	C	16F
R3214	B	C	7G
R3215	B	C	8H
R3216	B	C	5E
R3217	B	C	6D
R3218	B	C	7E
R3219	B	C	9E
R3220	B	C	14E
R3222	B	C	13E
R3223	B	C	12F
R3224	B	C	12F
R3225	B	C	12F
R3226	B	C	17B
R3227	B	C	17B
R3232	A	D	7C
R3233	B	C	6D
R3234	B	C	5C
R3235	A	D	8P
R3236	B	C	15C
R3237	A	D	13I
R3238	A	D	13I
R3239	B	C	12C
R3240	B	C	10C
R3241	B	C	10C
R4001	A	D	13G
R4002	B	C	7H
R4003	B	C	8F
R4004	B	C	14E
R4006	B	C	14B
R4010	B	C	10E
R4011	B	C	10F
R4012	B	C	9F
R4013	B	C	14C
R4018	B	C	7G
R4019	B	C	8G
R4020	B	C	8G
R4021	B	C	8G
R4022	B	C	6B
R4024	B	C	7G
R4025	B	C	7H
R5001	A	D	3P
R5101	A	D	3N
R5102	A	D	2K
R5103	B	C	2L
R5104	A	D	1L
R5105	B	C	2L
R5106	A	D	3L
R5107	A	D	3M
R5108	A	D	3M
R5109	A	D	2L
R5110	B	C	3L
R5301	A	D	7A
R5302	B	C	4G
R5303	B	C	4G
R5304	A	D	1F
R5305	B	C	4J
R5306	B	C	3D
R5307	B	C	1I
R5308	B	C	3G
R5309	B	C	3F
R5310	B	C	2F
R5311	B	C	2F
R5313	A	D	1C
R5314	B	C	4D
R5315	B	C	2E
R5316	B	C	4D
R5317	B	C	3F
R5318	B	C	4F
R5323	B	C	4G
R5324	B	C	4D
R5325	B	C	3D
R5326	B	C	2E
R5327	B	C	3E
R5328	B	C	4L
R5351	A	D	1D
R5352	A	D	2C
R5353	A	D	21B
R6020	B	C	21N
R6021	B	C	21N
R6022	B	C	21N
R6023	B	C	21M
R6025	B	C	15D
R6026	B	C	22N
R6030	B	C	21J
R6031	B	C	22L
R6032	B	C	20K
R6034	B	C	21J
R6050	A	D	21N
R6053	B	C	21P
R6508	B	C	20K
R6509	B	C	20K
R6510	B	C	20K
R6511	B	C	21K
R6551	B	C	20J
R6552	B	C	19J
R6650	B	C	22F
R6651	B	C	22F
R6652	B	C	22E
R6653	B	C	22E
R6654	B	C	21E
R6655	B	C	21E
R6656	B	C	21D
R6657	B	C	21F
R6658	B	C	21D
R6659	B	C	21D
R6660	B	C	22F
R6661	B	C	21E
R7001	B	C	10B
R7002	B	C	10B
R7003	B	C	11B
R7004	B	C	11B
R7005	A	D	14A
R7006	B	C	4B
R7007	B	C	5B
R7008	B	C	5B
R7009	B	C	2C
R7010	B	C	2C
R7013	B	C	15A
R7014	B	C	8B
R7015	A	D	8A
R7017	A	D	10B
R7020	B	C	15A
R7021	B	C	17B
R7022	B	C	15A
R7023	B	C	6B
R7024	B	C	5B
R7025	B	C	5B
R7030	B	C	15B
R7031	B	C	6B
R7032	B	C	5B
R7033	B	C	2B
R7034	B	C	1B
R7035	B	C	2B
R7036	B	C	2B
R7037	B	C	3B
R7040	B	C	16A
R7041	B	C	15A
R7202	A	D	18L
R7203	B	C	18L
R7204	A	D	19L
SWITCH			
S3001	A	D	18C
S3002	A	D	6F
S6050	A	D	18P
S7001	A	D	22B
S7002	A	D	18B
S7004	A	D	7B
S7006	A	D	6B
S7008	A	D	5B
S7010	A	D	4B
S7011	A	D	4B
S7012	A	D	3B
S7013	A	D	2B
S7014	A	D	2B
S7015	A	D	1B
S7016	A	D	17B
TESTPOINT			
TP106	A	D	6P
TP111	A	D	5P
TP2253	A	D	6P
TP4001	A	D	6P
TP7001	A	D	3A
TPGND	A	D	4A
OTHER			
CF6031	A	D	22K
CP501	A	D	21I
CP4001	A	D	3F
CP5301	A	D	4D
CP5302	A	D	4F
DI7001	A	D	12A
F5001	A	D	2N
FC5001	A	D	2P
FC5002	A	D	2N
FW3001	A	D	21N
FW3002	A	D	19L
FW3003	A	D	20L
K2251	B	C	16N
K2252	B	C	16N
K2253	B	C	16N
K5101	A	D	2L
K5102	A	D	1M
LF5002	A	D	3O
PC3001	A	D	16F
PC3002	A	D	8G
PC5101	A	D	4L
PC5102	A	D	4M
SG5001	A	D	3P
T2051	A	D	7O
T2052	A	D	6K
T5001	A	D	1K
TU6001	A	D	22P
VA5001	A	D	1P
VA5002	A	D	4P
VA5003	A	D	2P
WR1	A	D	12K
WR2	A	D	14L
X1	A	D	12L
X2	A	D	12L
X3001	A	D	13F
X3002	A	D	13G

4.13 2D DIGITAL CIRCUIT BOARD

<05> 2D DIGITAL
LPB10090-001B

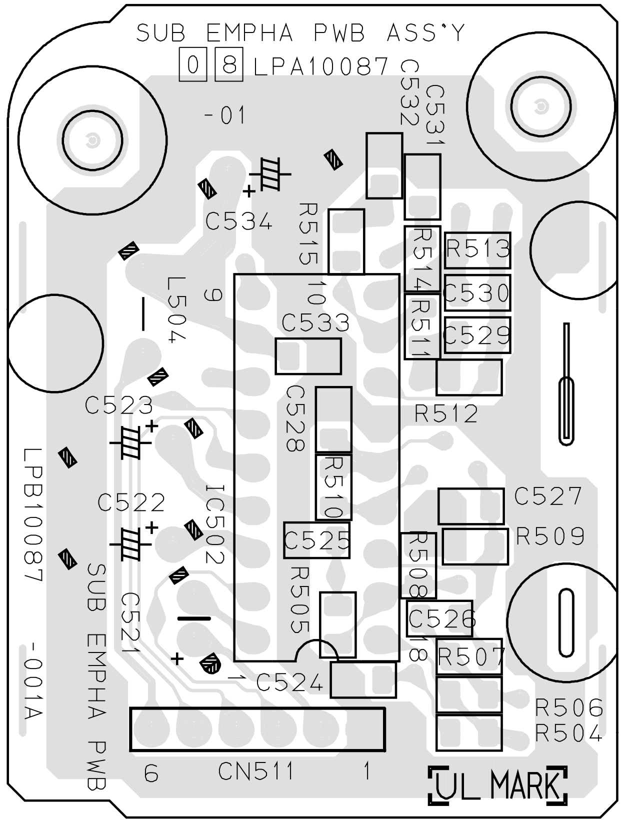


COMPONENT PARTS LOCATION GUIDE<2D DIGITAL>

REF.NO.	LOCATION		
CAPACITOR			
C1201	A	D	5D
C1202	B	C	5C
C1203	B	C	1A
C1204	B	C	1A
C1205	B	C	2A
C1206	B	C	3A
C1207	B	C	4A
C1208	B	C	4A
C1209	B	C	4A
C1210	B	C	6B
C1211	A	D	2E
C1212	B	C	2D
C1213	B	C	2D
C1214	B	C	2D
C1215	A	D	2D
C1216	B	C	3D
C1217	B	C	2C
C1218	B	C	2C
C1219	B	C	3C
C1220	A	D	3B
C1221	B	C	2B
C1222	B	C	2B
C1223	B	C	2B
C1224	B	C	3B
C1225	B	C	3B
C1226	B	C	2B
C1227	B	C	3C
C1228	A	D	3B
C1229	B	C	4C
C1230	B	C	4C
C1231	B	C	4C
C1232	B	C	4C
C1233	A	D	4C
C1234	B	C	4D
C1235	A	D	4D
C1236	B	C	4D
C1237	B	C	3D
C1238	B	C	4B
C1239	B	C	5B
C1240	B	C	5B
C1241	B	C	5B
C1242	A	D	5B
C1243	B	C	2A
C1244	A	D	3B
C1245	B	C	5B
C1246	A	D	5C
C1247	B	C	5C
C1248	B	C	4A
C1249	B	C	5B
C1250	B	C	5A
CONNECTOR			
CN1201	A	D	5A
DIODE			
D1201	A	D	5C
D1202	A	D	2A
D1203	A	D	3A
IC			
IC1201	B	C	3D
COIL			
L1201	A	D	5A
L1202	A	D	3E
L1203	A	D	4D
L1204	A	D	4B
L1205	A	D	2B
L1206	A	D	3B
L1207	A	D	4D
L1208	A	D	4B
L1209	A	D	5B
TRANSISTOR			
Q1201	A	D	5C
Q1202	B	C	2B
Q1203	B	C	3B
Q1204	B	C	4B
Q1205	B	C	3C
Q1206	B	C	4B
RESISTOR			
R1201	B	C	5C
R1202	B	C	5C
R1203	B	C	1A
R1204	B	C	1A
R1205	B	C	2A
R1206	B	C	5A
R1207	B	C	2D
R1208	B	C	2D
R1209	B	C	2D
R1210	B	C	3B
R1211	B	C	2C
R1212	B	C	2B
R1213	B	C	1B
R1214	B	C	2B
R1215	B	C	3B
R1216	B	C	2B
R1217	B	C	2B
R1218	B	C	3C
R1219	B	C	4C
R1220	B	C	4A
R1221	B	C	4B
R1222	B	C	4B
R1223	B	C	1B
R1224	B	C	4C
R1225	B	C	4A
R1226	B	C	4A
R1227	B	C	4B
R1228	B	C	4B
R1229	B	C	4B
R1230	B	C	2A
R1231	B	C	4B
R1232	B	C	3B
R1233	B	C	5A
VR1201	A	D	1E
OTHER			
LC1201	A	D	5B

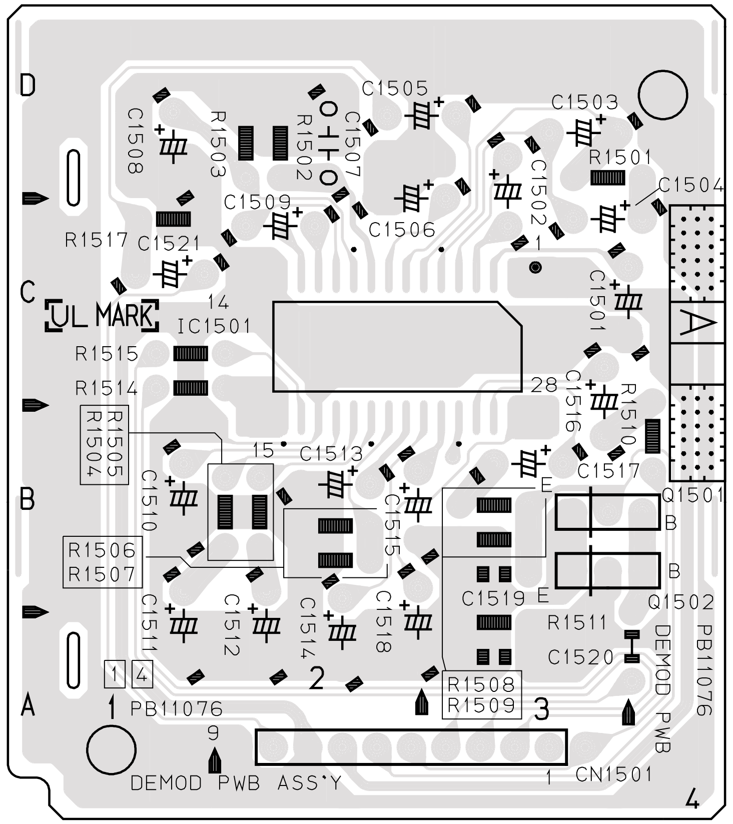
4.14 SUB EMPHA CIRCUIT BOARD

<08> SUB EMPHA
LPB10087-001A



4.15 DEMODULATOR CIRCUIT BOARD

<14> DEMOD
PB11076

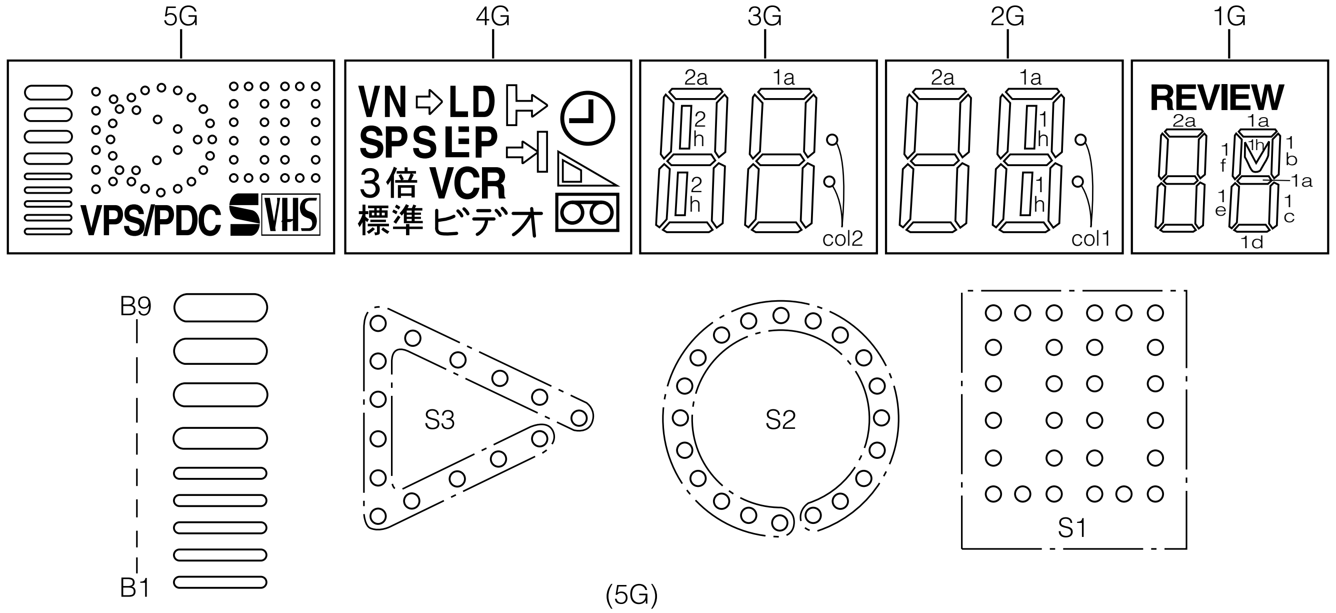


COMPONENT PARTS LOCATION GUIDE <DEMODULATOR>

REF.NO.	LOCATION		
CAPACITOR			
C1501	A	D	4C
C1502	A	D	3D
C1503	A	D	4D
C1504	A	D	4C
C1505	A	D	3D
C1506	A	D	3C
C1507	A	D	2C
C1508	A	D	1D
C1509	A	D	2C
C1510	A	D	1B
C1511	A	D	1A
C1512	A	D	2A
C1513	A	D	2B
C1514	A	D	2A
C1515	A	D	3B
C1516	A	D	3C
C1517	A	D	3B
C1518	A	D	3A
C1519	A	D	3B
C1520	A	D	3A
C1521	A	D	2C
CONNECTOR			
CN1501	A	D	3A
IC			
IC1501	B	C	2C
TRANSISTOR			
Q1501	A	D	3B
Q1502	A	D	3B
RESISTOR			
R1501	A	D	4C
R1502	A	D	2C
R1503	A	D	2C
R1504	A	D	2B
R1505	A	D	2B
R1506	A	D	2B
R1507	A	D	2B
R1508	A	D	3B
R1509	A	D	3B
R1510	A	D	4B
R1511	A	D	3A
R1514	A	D	2B
R1515	A	D	2C
R1517	A	D	2C

4.16 FDP GRID ASSIGNMENT AND ANODE CONNECTION

GRID ASSIGNMENT



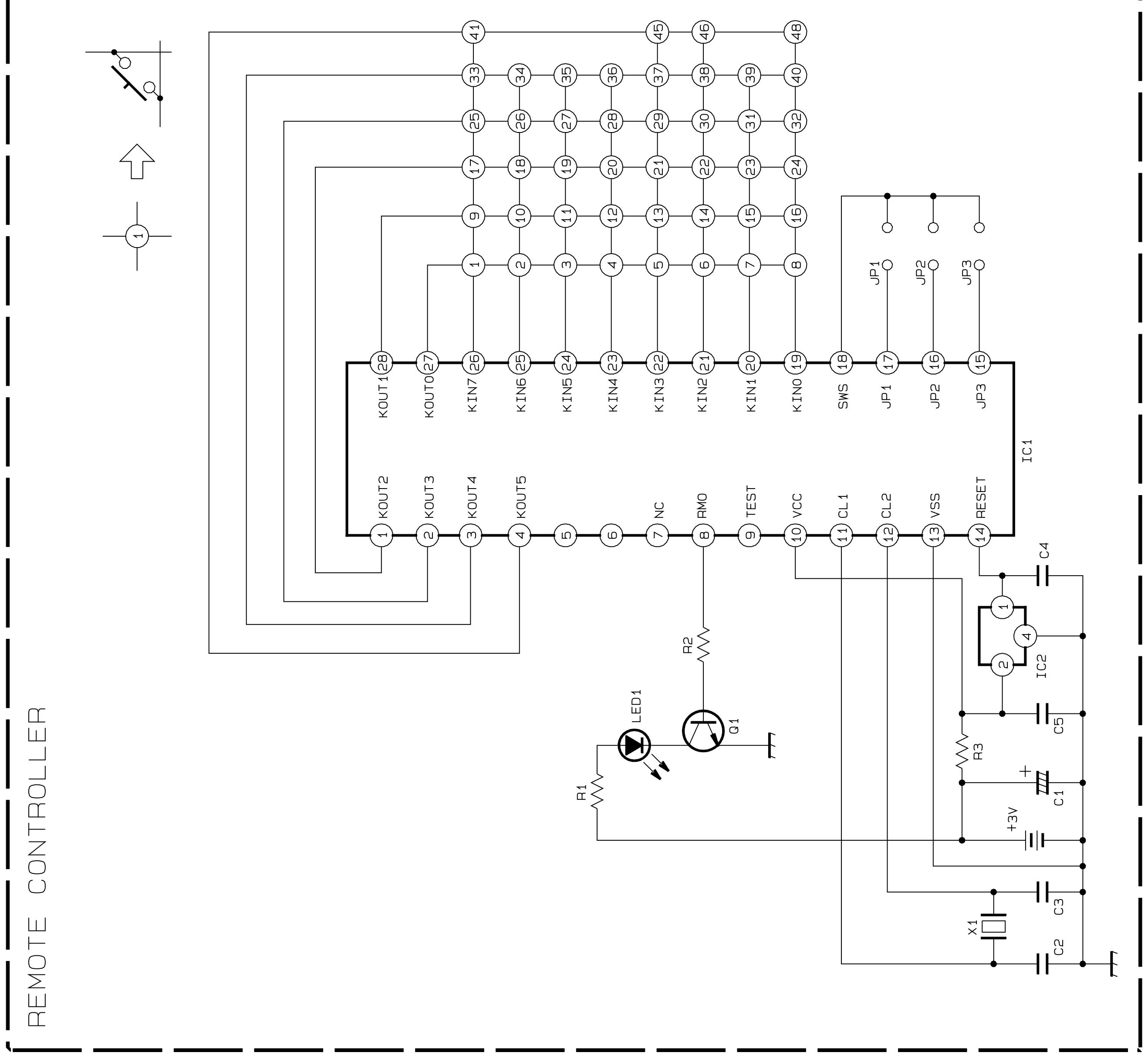
ANODE CONNECTION

	5G	4G	3G	2G	1G
P 1	S2	⇰	1a	1a	1a
P 2	S1	⇥	1b	1b	1b
P 3	S3	3倍	1f	1f	1f
P 4	VPS/PDC	標準	1g	1g	1g
P 5	SVHS	◷	1c	1c	1c
P 6	—	◺	1e	1e	1e
P 7	—	OO	1d	1d	1d
P 8	B9	VCR	col2	1h	1h
P 9	B8	ビデオ	2a	2a	2a
P10	B7	⇨	2b	2b	2b
P11	B6	VN	2f	2f	2f
P12	B5	LD	2g	2g	2g
P13	B4	SP	2c	2c	2c
P14	B3	S (SEP)	2e	2e	2e
P15	B2	: (SEP)	2d	2d	2d
P16	B1	LP (SEP)	2h	col1	REVIEW

4.17 REMOTE CONTROL SCHEMATIC DIAGRAM

NOTES:
1. All parts shown in this schematic are critical for safety.
2. This schematic is only for reference.
Avoid replacing individual parts.
Replace the entire unit only.

Key No.	Key Name
1	START+
2	1
3	4
4	STOP+
5	DATE+
6	CH+
7	3
8	6
9	CANSEL/C.RESET
10	2
11	7
12	0
13	8
14	TIMER
15	5
16	9
17	PROG
18	CABLE/DSS
19	TV
20	PROG CHEK
21	SP/EP
22	SKIP SEARCH
23	POWER
24	MBR SET/A/B
25	START-
26	TV/VCR
27	RE-VIEW
28	STOP-
29	DATE-
30	CH-
31	DISPLAY
32	AUDIO/MUTE
33	MENU
34	REC
35	REW
36	PLAY
37	STOP
38	FF
39	PAUSE/STILL
40	OK/ENTER
41	<</TV VOL-
45	Δ/TV CH+
46	∇/TV CH-
48	>>/TV VOL+
34+36	REC+PLAY
34+39	REC+PAUSE



4.18 VOLTAGE CHARTS

<VIDEO/AUDIO>

MODE PIN NO.	REC	PLAY
IC1		
1	4.4	2.3
2	2.9	2.9
3	2.5	2.5
4	1.9	1.4
5	1.9	1.5
6	2.4	2.1
7	1.7	0.8
8	0	0
9	2.6	3.0
10	2.2	2.2
11	3.0	3.0
12	2.8	2.5
13	3.0	3.0
14	2.2	2.4
15	0	0
16	2.8	2.8
17	1.5	1.5
18	2.8	2.8
19	2.3	2.3
20	2.8	2.8
21	1.5	1.9
22	2.8	2.8
23	3.0	2.8
24	5.0	5.0
25	0.4	0.4
26	0	0
27	1.3	2.3
28	2.8	2.3
29	1.9	1.9
30	2.1	2.1
31	0	0
32	2.5	2.5
33	5.0	5.0
34	2.7	2.4
35	5.0	5.0
36	2.5	2.5
37	2.3	2.3
38	0.4	0.5
39	1.3	1.2
40	-	-
41	2.6	2.6
42	-	-
43	0	0
44	2.2	2.2
45	3.5	3.5
46	3.9	3.9
47	3.0	3.0
48	2.5	2.5
49	5.0	5.0
50	2.5	2.5
51	2.8	2.8
52	2.3	2.3
53	2.3	2.3
54	2.4	2.4
55	2.1	2.1
56	0.4	0.4
57	2.3	2.3
58	8.7	8.7
59	4.5	4.5
60	4.5	4.5
61	4.4	4.4
62	4.3	4.3
63	2.3	2.3
64	2.3	2.3
65	1.7	1.7
66	3.3	3.3
67	4.4	4.4
68	4.4	4.4
69	2.3	2.3
70	0	0
71	0.3	0.3
72	0.2	0.2
73	0.2	0.2
74	2.3	2.3
75	2.5	2.5
76	0	0
77	2.5	2.5
78	0.3	0.3
79	0.2	0.2
80	0.2	0.2
81	2.3	2.3
82	0.7	0.7
83	0	0
84	2.3	2.3
85	2.3	2.3
86	2.2	2.2
87	1.6	1.8
88	2.3	2.3
89	2.3	2.3
90	2.3	2.3
91	0	0
92	0	0
93	0	2.4
94	0	1.9
95	0	0
96	2.4	2.4
97	2.7	2.3
98	2.5	2.3
99	4.9	4.9
100	5.0	5.0
101	0	0
102	0	0
103	0	0
104	2.3	2.3
105	2.2	2.3
106	2.4	2.3
107	4.9	4.9
108	0	0
109	0	0
110	0	0
111	0	4.0
112	2.5	2.5
113	0.5	0.5
114	0	0
115	2.5	2.5
116	2.5	2.5
117	2.5	2.5
118	0	0
119	2.5	2.5
120	0	0
Q1 [HR-S3800U/U(C)]		
E	-	-
C	-	-
B	-	-
Q2 [HR-S3800U/U(C)]		
E	-	-
C	-	-
B	-	-
Q3 [HR-S3800U/U(C)]		
E	-	-
C	-	-
B	-	-
Q4 [HR-S3800U/U(C)]		
E	-	-
C	-	-
B	-	-
Q5		
E	5.0	2.9
C	0	0
B	4.4	2.2
Q7		
E	1.6	1.6
C	3.3	3.3
B	2.2	2.2
Q8		
E	2.8	2.8
C	5.0	5.0
B	3.4	3.4
Q9		
E	3.4	3.4
C	0	0
B	2.8	2.8
Q12		
E	3.8	3.8
C	0	0
B	3.1	3.1
Q17		
E	0	0
C	0	0
B	4.8	4.8
Q21		
E	2.1	2.1
C	0	0
B	1.5	1.5
Q33		
E	0	0
C	4.8	4.8
B	0	0
Q38		
E	2.9	2.9
C	5.0	5.0
B	3.6	3.6
Q45		
E2.3	2.3	
C0	0	
B1.7	1.7	
Q401 [HR-S4800U/U(C)]		
E	9.3	0
C	0	0
B	8.8	0
Q402 [HR-S4800U/U(C)]		
E	7.3	0
C	0	0
B	6.7	0
Q403 [HR-S4800U/U(C)]		
E	0	0
C	0	0
B	4.7	0
Q404 [HR-S4800U/U(C)]		
E	0	0
C	0	11.0
B	4.7	0
Q405 [HR-S4800U/U(C)]		
E	11.0	11.0
C	11.0	0
B	10.3	11.0
Q2001		
E	-15.1	0
C	0	0
B	-21.5	0.7
Q2002		
E	-15.1	0
C	0	0
B	-21.0	0.7
Q2003		
E	5.0	5.0
C	-21.2	4.9
B	4.9	0
Q2051		
E	0	0
C	7.5	0.3
B	0.2	0.3
Q2052		
E	11.0	11.0
C	10.7	0.2
B	10.1	11.0
Q2053		
E	0	0
C	0	11.1
B	4.9	0
Q2054		
E	10.7	0.2
C	10.5	0.2
B	9.9	0.2
Q2055		
E	0	0
C	0	0.5
B	4.9	0
Q2061 [HR-S4800U/U(C)]		
E	0	0
C	8.6	0.2
B	-0.2	0.2
Q2062 [HR-S4800U/U(C)]		
E	10.8	0.3
C	10.7	0.2
B	10.1	0.4
Q2063 [HR-S4800U/U(C)]		
E	0	0
C	0	0.4
B	4.9	0
Q2251		
E	4.9	4.9
C	1.6	1.8
B	4.9	4.9

MODE PIN NO.	REC	PLAY
CN1		
1	0	0
2	0	0
3	0	0
4	0	0
5	2.2	2.3
6	2.2	2.3
7	2.2	2.3
8	2.2	2.3
9	2.7	2.3
10	2.7	2.3
11	2.7	2.3
12	0	0
13	0	0
CN2001		
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	2.3	2.3
7	2.5	2.3
CN2002		
1	0	0
2	0	0

<SYSTEM CONTROL>

MODE PIN NO.	REC	PLAY
IC3001		
1	-	-
2	-	-
3	0.6	0.6
4	0	0
5	5.1	5.1
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	5.0	5.0
14	0	0
15	0	5.0
16	4.8	4.8
17	3.8	3.8
18	3.4	3.4
19	4.9	0
20	4.9	0
21	1.7	1.7
22	4.9	4.9
23	2.4	2.4
24	0	0
25	-	-
26	0	2.4
27	5.0	0
28	0	0
29	0	0
30	4.9	4.9
31	4.7	4.7
32	0	0
33	2.6	2.6
34	1.1	1.3
35	0	0
36	4.9	4.9
37	-	-
38	-	-
39	0	0
40	-	-
41	-	-
42	4.9	4.9
43	5.0	5.0
44	0	0
45	5.0	5.0
46	5.0	5.0
47	2.4	2.4
48	0	0
49	2.4	2.4
50	2.4	2.4
51	5.0	5.0
52	2.4	2.4
53	2.5	2.5
54	0	0
55	0	0
56	-	-
57	-	-
58	0	0
59	0	0
60	0	0
61	0	0
62	4.9	4.9
63	4.9	4.9
64	0	0
65	2.6	2.6
66	0.4	0.4
67	2.3	2.3
68	2.3	2.3
69	2.3	2.3
70	2.3	2.3
71	0	0
72	2.3	2.3
73	4.8	4.8
74	2.8	2.3
75	1.9	2.3
76	2.3	2.3
77	0	0
78	0	0
79	4.6	4.6
80	4.9	0
81	4.9	4.9
82	0	0
83	0	3.4
84	0	1.8
85	5.0	5.0
86	1.1	1.1
87	0	0
88	0	0
89	0	0
90	0	0
91	0	0
92	4.9	0
93	0	0
94	4.3	4.5
95	-	-
96	-	-
97	-	-
98	5.0	5.0
99	0	0
100	0	0
IC3002		
1	11.6	11.6
2	0.3	0.3
3	0	0
4	0.2	0.2
5	11.8	11.8
6	11.8	11.8
7	0	0
8	0	0
9	0	0
IC3003		
1	4.9	4.9
2	4.9	4.9
3	0	0
IC3004		
1	0	0
2	0	0
3	0	0
4	0	0
5	-	-
6	-	-
7	0	0
8	4.9	4.9
Q3001		
E	0	0
C	4.6	4.4
Q3002		
E	0	0
C	5.0	5.0
Q3003		
E	0	0
C	11.6	11.6
B	0.6	0.6
Q3004		
E	0	0
C	0	0
B	0.7	0.7
Q3005		
E	0	0
C	0	0
B	0	0
Q4001		
E	0	0
C	0	0
B	4.4	4.4
Q4002		
E	4.8	4.8
C	5.8	5.8
B	5.5	5.5
Q7201		
E	5.1	5.1
C	0	0
B	5.0	5.0
CN3001		
1	0	0
2	2.5	2.5
3	2.5	2.5
4	5.0	5.0
5	0	0
6	4.9	4.9
7	-	-
8	11.7	11.7
CN3002		
1	11.7	11.7
2	0	0
3	1.4	1.4
4	0.4	0.4
5	2.6	2.6
CN3003		
1	0.2	0.2
2	0.3	0.3
CN3004		
1	4.9	4.9
2	4.9	4.9
3	0	0
4	0	0
FW3001		
1	0	0
2	0	0
FW3002		
10	0	
20	0	

<SW.REG>

MODE PIN NO.	REC	PLAY
IC5101		
1	61.5	58.6
2	-	-
3	0	0
4	-	-
5	-	-
IC5301		
1	5.7	5.7
2	5.1	5.1
3	4.8	4.8
4	0	0
5	11.8	11.8
6	11.1	11.1
7	11.8	11.8
8	5.7	5.7
9	1.3	1.3
10	4.4	4.4

<TUNER>

MODE PIN NO.	REC	PLAY
Q6501		
E	0	0
C	0	0
B	3.5	3.5
Q6502		
E	0	0
C	0	0
B	3.5	3.5
Q6551		
E	8.9	8.9
C	10.9	10.9
B	9.6	9.6
CN6701		
1	0	0
2	-	-
3	-	-
4	0	0
5	0	0
6	0	0
7	9.0	9.0
8	0	0
9	2.0	2.0

<DISPLAY>

MODE PIN NO.	REC	PLAY
IC7001		
1	4.9	4.9
2	2.1	2.1
3	0	0
4	2.1	2.1
5	4.9	4.9
6	4.9	4.9
7	4.9	4.9
8	4.9	4.9
9	4.9	4.9
10	4.9	4.9
11	4.9	4.9
12	-	-
13	4.1	-
14	4.9	4.9
15	4.1	-
16	-27.8	-27.8
17	-27.8	-27.8
18	-27.5	-27.5
19	-27.5	-27.5
20	-27.5	-27.5
21	-23.4	-23.4
22	-	-
23	-	-
24	-	-
25	-	-
26	-	-
27	-	-
28	-	-
29	-	-
30	-	-
31	-	-
32	-	-
33	-	-
34	-	-
35	-	-
36	-	-
37	-	-
38	-	-
39	-	-
40	-	-
41	-	-
42	-	-
43	-	-
44	4.9	4.9
IC7002		
1	5.1	5.1
2	5.1	5.1
3	0	0
CN7001		
1	0	0
2	0	0
3	5.0	5.0
4	5.0	5.0
5	5.0	5.0
6	5.0	5.0
7	0	0
8	5.0	5.0
9	5.0	5.0

<TERMINAL>

MODE PIN NO.	REC	PLAY
Q901		
E	3.1	3.1
C	0	0
B	2.4	2.4
Q903		
E	3.0	3.0
C	0	0
B	2.3	2.3
Q904		
E	2.8	2.8
C	0	0
B	2.1	2.1
CN7103 [HR-S4800U/U(C)]		
1	0	0
2	0	0
3	0	0
4	0	0

<S-SUB>

MODE PIN NO.	REC	PLAY
IC501		
1	2.8	2.8
2	0.3	0.3
3	2.1	2.1
4	4.9	4.9
5	2.8	2.8
6	0.2	0.2
7	2.1	2.1
8	2.7	2.7
9	2.8	2.8
10	2.6	2.6
11	2.1	2.1
12	2.8	2.8
13	0	0
14	2.8	2.8
15	2.3	2.3
16	2.7	2.7
17	2.1	2.1
18	0	0
19	2.4	2.4
20	0	0
21	3.6	3.6
22	2.7	2.7
23	2.9	2.1
24	3.0	3.0
25	2.9	2.9
26	5.0	5.0
27	3.0	3.0
28	2.5	2.3
29	2.6	2.3
30	4.9	4.9
31	2.9	2.9
32	0.1	4.9
33	2.9	2.9
34	2.9	2.9
35	2.9	2.9
36	2.9	2.9
37	0	0
38	4.0	4.0
39	3.6	3.6
40	2.8	2.8
41	2.7	2.7
42	2.9	2.9
43	3.3	3.3
44	2.0	2.0
45	2.9	2.9
46	5.0	5.0
47	0.7	3.1
48	2.9	2.9
49	0	0
50	2.9	2.9
51	2.9	2.9
52	2.4	2.1
53	3.2	3.2
54	2.4	2.4
55	1.9	1.1
56	2.6	3.4
CN501		
1	3.7	3.7
2	0	0
3	0.7	3.1
4	5.0	5.0
5	2.8	2.8
6	0.1	4.9
7	3.3	3.3
8	0	0
9	2.8	2.8
10	-0.5	-0.5
11	3.5	3.5
12	3.9	3.9
13	0	0
14	0	0
15	2.5	2.5
16	0	0
17	0	0
CN502		
1	0	0
2	2.5	2.3
3	0.1	4.9
4	4.9	4.9
5	2.2	2.2
6	5.0	5.0
CN503		
1	2.1	2.1
2	0	0
3	2.3	2.3
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	4.9	4.9
11	0	0
12	0	0
13	0	0
CN504		
1	0	0
2	0	0
3	0	0
4	4.9	4.9
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	2.3	2.3
12	0	0
13	2.1	2.1

<2D DIGITAL>

MODE PIN NO.	REC	PLAY
IC1201	-	-
Q1201	-	-
Q1202	-	-
Q1203	-	-
Q1204	-	-
Q1205	-	-
Q1206	-	-
CN1201		
1	3.7	3.7
2	0	0
3	0.7	3.1
4	5.0	5.0
5	2.8	2.8
6	0.1	4.9
7	3.3	3.3
8	0	0
9	2.8	2.8
10	-0.5	-0.5
11	3.5	3.5
12	3.9	3.9
13	0	0
14	0	0
15	2.5	2.5
16	0	0
17	0	0

<SUB EMPHA>

MODE PIN NO.	REC	PLAY
IC502		
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	2.9	2.9
11	2.9	2.9
12	2.9	2.9
13	0	0
14	2.8	2.8
15	2.8	2.8
16	1.9	1.9
17	1.9	1.9
18	1.9	1.9
CN511		
1	0	0
2	2.5	2.3
3	0.1	4.9
4	4.9	4.9
5	2.2	2.2
6	5.0	5.0

<DEMODULATOR>

MODE PIN NO.	REC	PLAY
IC1501	-	-
CN1501		
1	0	0
2	-	-
3	-	-
4	0	0
5	0	0
6	0	0
7	9.0	9.0
8	0	0
9	2.0	2.0

<S JACK> [HR-S4800U/U(C)]

MODE PIN NO.	REC	PLAY
CN7108		
1	0	0
2	0	0
3	0	0
4	0	0

<SHUTTLE>

MODE PIN NO.	REC	PLAY
CN7008		
1	5.0	5.0
2	5.0	5.0
3	0	0
4	5.0	5.0
5	5.0	5.0
6	5.0	5.0
7	5.0	5.0
8	0	0
9	0	0

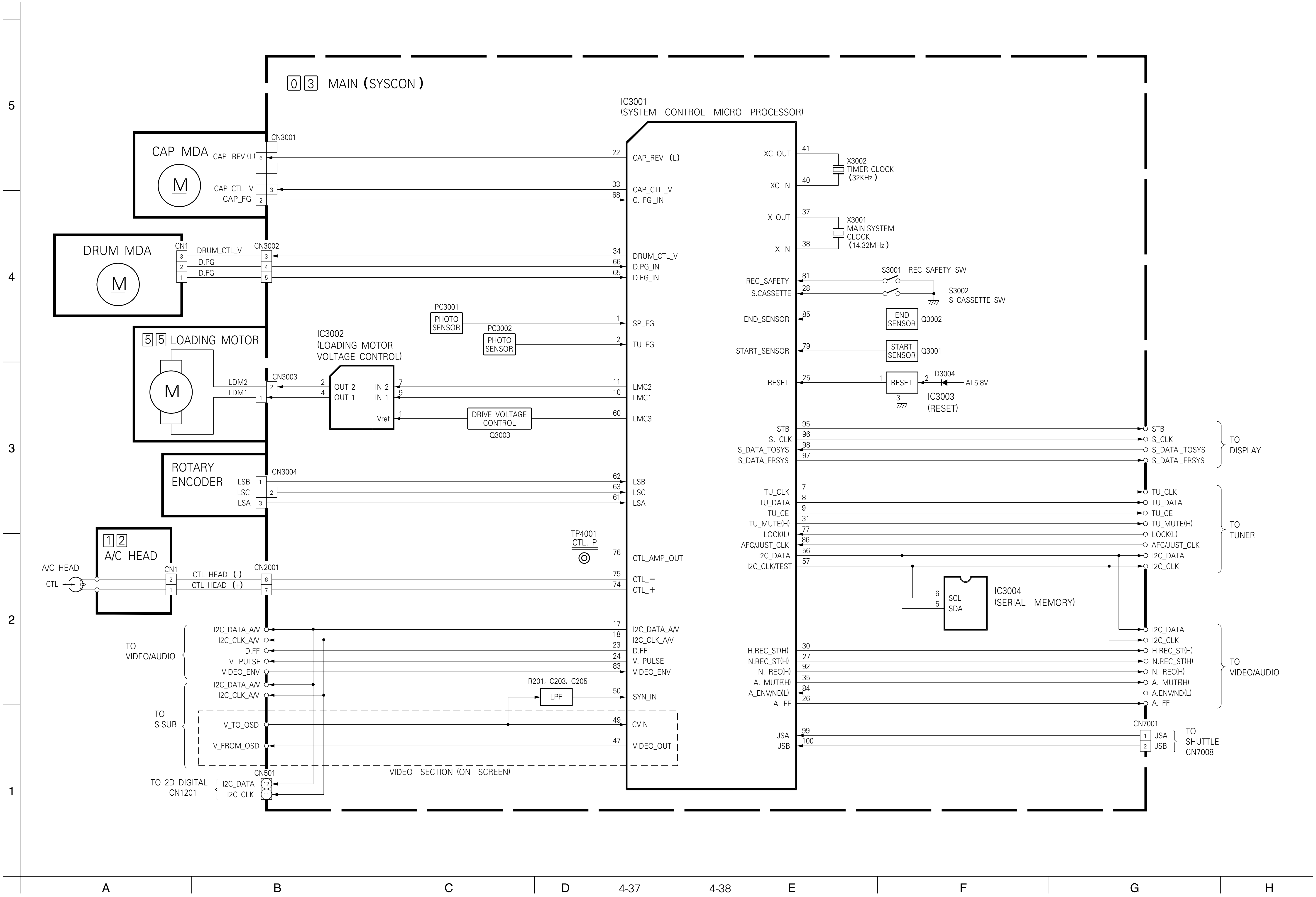
<R.PAUSE>

MODE PIN NO.	REC	PLAY
FW7104		
1	0	0
2	0	0

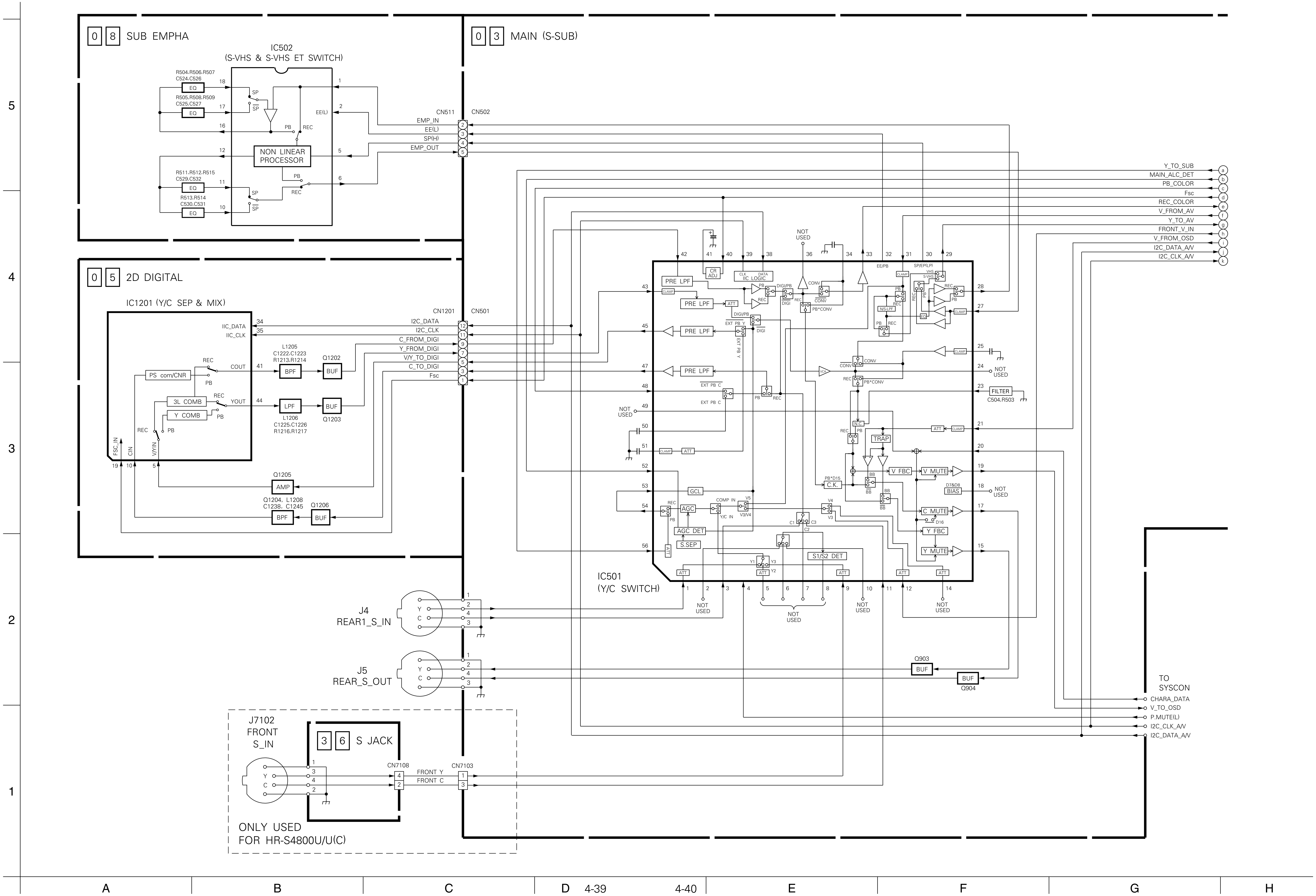
<C.BOX>

MODE PIN NO.	REC	PLAY
FW7105		
1	0	0
2	0	0

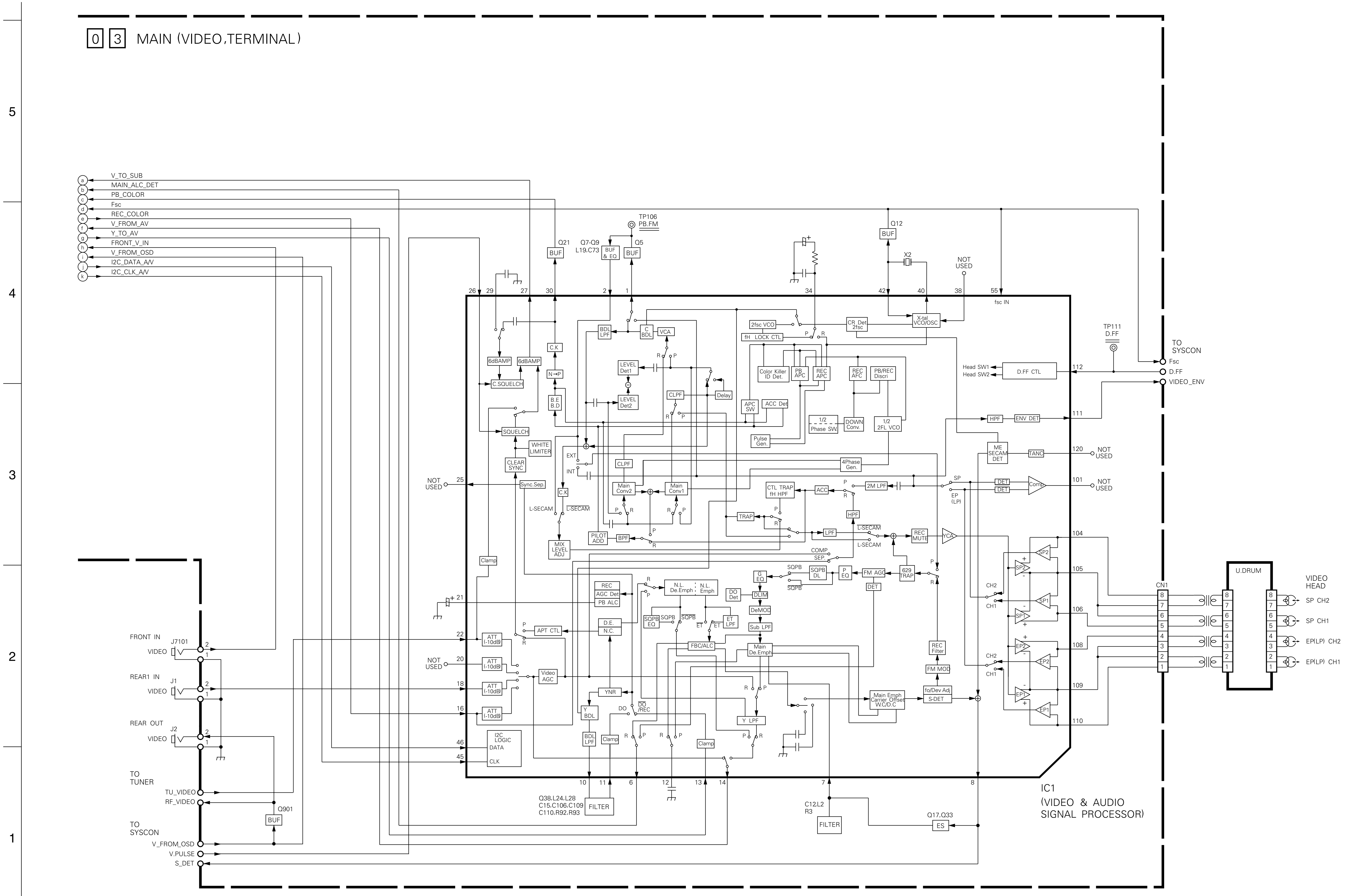
4.19 SYSTEM CONTROL BLOCK DIAGRAM



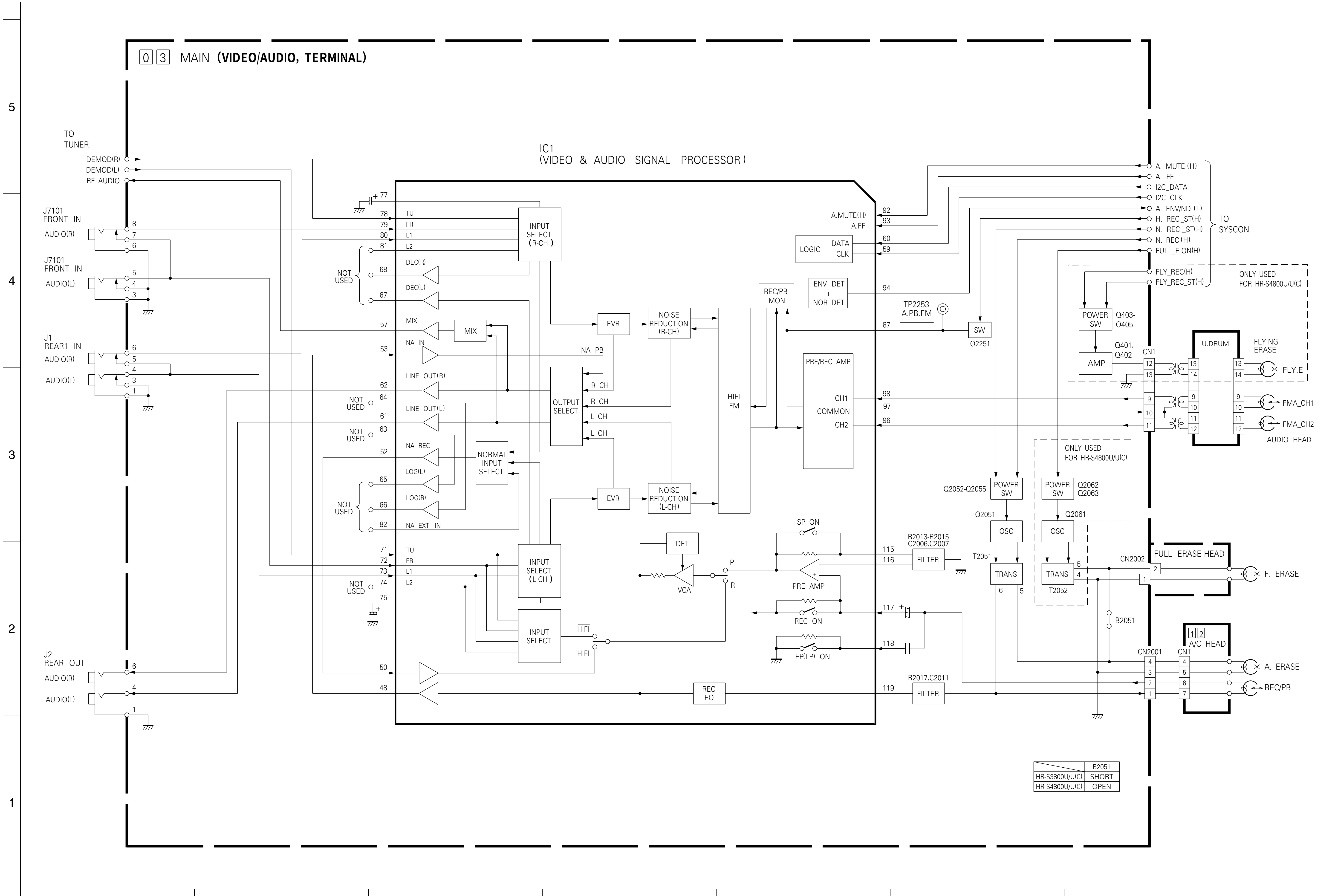
4.20 VIDEO BLOCK DIAGRAM



0 3 MAIN (VIDEO,TERMINAL)



4.21 AUDIO BLOCK DIAGRAM



	B2051
HR-S3800U/U(C)	SHORT
HR-S4800U/U(C)	OPEN